Lenovo IdeaPad S110

Hardware Maintenance Manual

Note:

Before using this information and the product it supports, be sure to read the general information under “Notices” on page 81.

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Contents

About this manual

This manual contains service and reference information for the following Lenovo IdeaPad product:

Lenovo IdeaPad S110

Use this manual to troubleshoot problems.

The manual is divided into the following sections:

- The common sections provide general information, guidelines, and safety information required for servicing computers.
- The product-specific section includes service, reference, and product-specific parts information.

Important:

This manual is intended only for trained servicers who are familiar with Lenovo IdeaPad products. Use this manual to troubleshoot problems effectively.

Before servicing a Lenovo IdeaPad product, make sure to read all the information under “Safety information” on page 1 and “Important service information” on page 14.

Safety information

This chapter presents the following safety information that you need to get familiar with before you service an Lenovo IdeaPad S110 computer:

General safety

Follow these rules below to ensure general safety:

- Observe a good housekeeping in the area where the machines are put during and after the maintenance.
- When lifting any heavy object:
  1. Make sure that you can stand safely without slipping.
  2. Distribute the weight of the object equally between your feet.
  3. Use a slow lifting force. Never move suddenly or twist when you attempt to lift it.
  4. Lift it by standing or pushing up with your leg muscles; this action could avoid the strain from the muscles in your back. Do not attempt to lift any object that weighs more than 16 kg (35 lb) or that you think is too heavy for you.
- Do not perform any action that causes hazards to the customer, or that makes the machine unsafe.
- Before you start the machine, make sure that other service representatives and the customer are not in a hazardous position.
- Place removed covers and other parts in a safe place, keeping them away from all personnel, while you are servicing the machine.
- Keep your toolcase away from walk areas so that other people will not trip it over.
- Do not wear loose clothing that can be trapped in the moving parts of the machine. Make sure that your sleeves are fastened or rolled up above your elbows. If your hair is long, fasten it.
- Insert the ends of your necktie or scarf inside clothing or fasten it with the nonconductive clip, about 8 centimeters (3 inches) from the end.
- Do not wear jewelry, chains, metal-frame eyeglasses, or metal fasteners for your clothing.

  Attention: Metal objects are good electrical conductors.
- Wear safety glasses when you are hammering, drilling, soldering, cutting wire, attaching springs, using solvents, or working in any other conditions that may be hazardous to your eyes.
- After service, reinstall all safety shields, guards, labels, and ground wires. Replace any safety device that is worn or defective.
- Reinstall all covers correctly before returning the machine to the customer.
- Fan louvers on the machine help to prevent the overheating of internal components. Do not obstruct fan louvers or cover them with labels or stickers.

Electrical safety

Observe the following rules when working on electrical equipments.

> **Important**
>
> Use only approved tools and test equipments. Some hand tools have handles covered with a soft material that does not insulate you when working with live electrical currents.
>
> Many customers have rubber floor mats near their machines that contain small conductive fibers to decrease electrostatic discharges. Do not use such kind of mat to protect yourself from electrical shock.

- Find the room emergency power-off (EPO) switch, disconnecting the switch or electrical outlet. If an electrical accident occurs, you can then operate the switch or unplug the power cord quickly.
- Do not work alone under hazardous conditions or near the equipment that has hazardous voltages.
- Disconnect all power before:
  - Performing a mechanical inspection
  - Working near power supplies
  - Removing or installing main units
- Before you start to work on the machine, unplug the power cord. If you cannot unplug it, ask the customer to power-off the wall box that supplies power to the machine, and to lock the wall box in the off position.
- If you need to work on a machine that has exposed electrical circuits, observe the following precautions:
  - Ensure that another person, familiar with the power-off controls, is near you.
    Attention: Another person must be there to switch off the power, if necessary.
  - Use only one hand when working with powered-on electrical equipment; keep the other hand in your pocket or behind your back.
    Attention: An electrical shock can occur only when there is a complete circuit. By observing the above rule, you may prevent a current from passing through your body.
  - When using testers, set the controls correctly and use the approved probe leads and accessories for that tester.
  - Stand on suitable rubber mats (obtained locally, if necessary) to insulate you from grounds such as metal floor strips and machine frames.

Observe the special safety precautions when you work with very high voltages; instructions for these precautions are in the safety sections of maintenance information. Be extremely careful when you measure the high voltages.

- Regularly inspect and maintain your electrical hand tools for safe operational condition.
- Do not use worn or broken tools and testers.
- Never assume that power has been disconnected from a circuit. First, check it to make sure that it has been powered off.
- Always look carefully for possible hazards in your work area. Examples of these hazards are moist floors, nongrounded power extension cables, power surges, and missing safety grounds.

- Do not touch live electrical circuits with the reflective surface of a plastic dental mirror. The surface is conductive; such touching can cause personal injury and machine damage.
- Do not service the following parts with the power on when they are removed from their normal operating places in a machine:
  - Power supply units
  - Pumps
  - Blowers and fans
  - Motor generators

  and similar units. (This practice ensures correct grounding of the units.)
- If an electrical accident occurs:
  - Caution: do not become a victim yourself.
  - Switch off the power.
  - Send the victim to get medical aid.

Safety inspection guide

The purpose of this inspection guide is to assist you in identifying potential unsafe conditions. As each machine was designed and built, required safety items were installed to protect users and service personnel from injury. This guide addresses only those items. You should use good judgment to identify potential safety hazards according to the attachment of non-Lenovo IdeaPad features or options not covered by this inspection guide.

If any unsafe conditions are present, you must determine how serious the apparent hazard could be and whether you can continue without first correcting the problem.

Consider these conditions and the safety hazards they present:
- Electrical hazards, especially primary power (primary voltage on the frame can cause serious or fatal electrical shock)
- Explosive hazards, such as a damaged CRT face or a bulging capacitor
- Mechanical hazards, such as loose or missing hardware

To determine whether there are any potential unsafe conditions, use the following checklist at the beginning of every service task. Begin the checks with the power off, and the power cord disconnected.

Checklist:
1. Check exterior covers for damage (loose, broken, or sharp edges).
2. Turn off the computer. Disconnect the power cord.
3. Check the power cord for:
   a. A third-wire ground connector in good condition. Use a meter to measure third-wire ground continuity for 0.1 ohm or less between the external ground pin and the frame ground.
   b. The power cord should be the type specified in the parts list.
   c. Insulation must not be frayed or worn.
4. Check for cracked or bulging batteries.
5. Remove the cover.
6. Check for any obvious non-Lenovo IdeaPad alterations. Use good judgment as to the safety of any non-Lenovo IdeaPad alterations.

7. Check inside the unit for any obvious unsafe conditions, such as metal filings, contamination, water or other liquids, or signs of fire or smoke damage.
8. Check for worn, frayed, or pinched cables.

Handling devices that are sensitive to electrostatic discharge

Any computer part containing transistors or integrated circuits (ICs) should be considered sensitive to electrostatic discharge (ESD). ESD damage can occur when there is a difference in charge between objects. Protect against ESD damage by equalizing the charge so that the machine, the part, the work mat, and the person handling the part are all at the same charge.

Notes:

1. Use product-specific ESD procedures when they exceed the requirements noted here.
2. Make sure that the ESD protective devices you use have been certified (ISO 9000) as fully effective.

When handling ESD-sensitive parts:

- Keep the parts in protective packages until they are inserted into the product.
- Avoid contact with other people.
- Wear a grounded wrist strap against your skin to eliminate static on your body.
- Prevent the part from touching your clothing. Most clothing is insulative and retains a charge even when you are wearing a wrist strap.
- Use the black side of a grounded work mat to provide a static-free work surface. The mat is especially useful when handling ESD-sensitive devices.
- Select a grounding system, such as those listed below, to provide protection that meets the specific service requirement.

Note:

The use of a grounding system to guard against ESD damage is desirable but not necessary.

  – Attach the ESD ground clip to any frame ground, ground braid, or green-wire ground.
  – When working on a double-insulated or battery-operated system, use an ESD common ground or reference point. You can use coax or connector-outside shells on these systems.
  – Use the round ground prong of the ac plug on ac-operated computers.

Grounding requirements

Electrical grounding of the computer is required for operator safety and correct system function. Proper grounding of the electrical outlet can be verified by a certified electrician.

Safety notices: multilingual translations

The safety notices in this section are provided in English, French, German, Hebrew, Italian, Japanese, and Spanish.

Safety notice 1

Before the computer is powered on after FRU replacement, make sure all screws, springs, and other small parts are in place and are not left loose inside the computer. Verify this by shaking the computer and listening for rattling sounds. Metallic parts or metal flakes can cause electrical shorts.

Avant de remettre l’ordinateur sous tension après remplacement d’une unité en clientèle, vérifiez que tous les ressorts, vis et autres pièces sont bien en place et bien fixées. Pour ce faire, secouez l’unité et assurez-vous qu’aucun bruit suspect ne se produit. Des pièces métalliques ou des copeaux de métal pourraient causer un court-circuit.

Bevor nach einem FRU-Austausch der Computer wieder angeschlossen wird, muß sichergestellt werden, daß keine Schrauben, Federn oder andere Kleinteile fehlen oder im Gehäuse vergessen wurden. Der Computer muß geschüttelt und auf Klappergeräusche geprüft werden. Metallteile oder-splitter können Kurzschlüsse erzeugen.

לפני הפעלת המחשב לאחר החלפת FRU יש לוודא
שכל הברגים, הקפיצים, וחלקים קטנים אחרים נמצאים
במקומם ואינם חופשיים לזוז בתוך המחשב. כדי לוודא
זאת, יש לטלטל את המחשב ולהקשיב לגילוי קולות שקשוק.
חלקי או שבבי מתכת עלולים לגרום לקצרים חשמליים.

Prima di accendere l’elaboratore dopo che é stata effettuata la sostituzione di una FRU, accertarsi che tutte le viti, le molle e tutte le altri parti di piccole dimensioni siano nella corretta posizione e non siano sparse all’interno dell’elaboratore. Verificare ciò scuotendo l’elaboratore e prestando attenzione ad eventuali rumori; eventuali parti o pezzetti metallici possono provocare cortocircuiti pericolosi.

FRU の交換後、コンピュータの電源を入れる前に、ねじ、バネ、その他の小さな部品がすべて正しい位置にあり、またコンピュータの内部で緩んでいないことを確認してください。
これを確認するには、コンピュータを振って、カチャカチャと音がしないか確かめます。金属部品や金属破片はショートの原因になることがあります。

Antes de encender el sistema despues de sustituir una FRU, compruebe que todos los tornillos, muelles y demás piezas pequeñas se encuentran en su sitio y no se encuentran sueltas dentro del sistema. Compruébelo agitando el sistema y escuchando los posibles ruidos que provocarían. Las piezas metálicas pueden causar cortocircuitos eléctricos.

Safety notice 2

⚠ DANGER

Some standby batteries contain a small amount of nickel and cadmium. Do not disassemble a standby battery, recharge it, throw it into fire or water, or shortcircuit it. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

Certaines batteries de secours contiennent du nickel et du cadmium. Ne les démontez pas, ne les rechargez pas, ne les exposez ni au feu ni à l’eau. Ne les mettez pas en court-circuit. Pour les mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la pile de sauvegarde ou celle de l’horloge temps réel, veillez à n’utiliser que les modèles cités dans la liste de pièces détachées adéquate. Une batterie ou une pile inappropriée risque de prendre feu ou d’exploser.

Die Bereitschaftsbatterie, die sich unter dem Diskettenlaufwerk befindet, kann geringe Mengen Nickel und Cadmium enthalten. Sie darf nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Bereitschafts-oder Systembatterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללות המתנה מסוימות מכילות כמות קטנה של ניקל וקדמיום. אין לפרק סוללת המתנה, לטעון אותה מחדש, להשליך אותה לאש או למים או לקצר אותה. יש לסלק את הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

Alcune batterie di riserva contengono una piccola quantità di nichel e cadmio. Non smontarle, ricaricarle, gettarle nel fuoco o nell’acqua né cortocircuitarle. Smaltirle secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria dell’RTC (real time clock) o la batteria di supporto, utilizzare soltanto i tipi inseriti nell’appropriato Catalogo parti. L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

予備バッテリーの中には少量のニッケルとカドミウムが含まれているものがあります。したがって、予備バッテリーの分解、再充電、火または水の中への投棄、またはショートさせることは決して行わないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Algunas baterías de reserva contienen una pequeña cantidad de níquel y cadmio. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 3

⚠ DANGER

The battery pack contains small amounts of nickel. Do not disassemble it, throw it into fire or water, or short-circuit it. Dispose of the battery pack as required by local ordinances or regulations. Use only the battery in the appropriate parts listing when replacing the battery pack. Use of an incorrect battery can result in ignition or explosion of the battery.

La batterie contient du nickel. Ne la démontez pas, ne l'exposez ni au feu ni à l'eau. Ne la mettez pas en court-circuit. Pour la mettre au rebut, conformez-vous à la réglementation en vigueur. Lorsque vous remplacez la batterie, veillez à n'utiliser que les modèles cités dans la liste de pièces détachées adéquate. En effet, une batterie inappropriée risque de prendre feu ou d'exploser.

Akkus enthalten geringe Mengen von Nickel. Sie dürfen nicht zerlegt, wiederaufgeladen, kurzgeschlossen, oder Feuer oder Wasser ausgesetzt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

מארז הסוללה מכיל כמות קטנה של ניקל וקדמיום. אין לפרק את מארז הסוללה, להשליך אותו לאש או למים או לקצר אותו. יש לסלק את מארז הסוללה הסוללה כנדרש על ידי התקנות והחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימה בזמן החלפת מארז הסוללה. שימוש בסוללה לא מתאימה עלול לגרום להצתה או התפוצצות של הסוללה.

La batteria contiene piccole quantità di nichel. Non smontarla, gettarla nel fuoco o nell'acqua né cortocircuitarla. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). Quando si sostituisce la batteria, utilizzare soltanto i tipi inseriti nell'appropriato Catalogo parti. L'impiego di una batteria non adatta potrebbe determinare l'incendio o l'esplosione della batteria stessa.

バッテリー・パックには少量のニッケルが含まれています。バッテリー・パックを分解したり、火または水の中に投げ込んだり、ショートさせないでください。バッテリー・パックの廃棄にあたっては、地方自治体の条例または規則に従ってください。バッテリー・パックを交換するときは、適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

Las baterías contienen pequeñas cantidades de níquel. No las desmonte, ni recargue, ni las eche al fuego o al agua ni las cortocircuite. Deséchelas tal como dispone la normativa local. Utilice sólo baterías que se encuentren en la lista de piezas al sustituir la batería. La utilización de una batería no apropiada puede provocar la ignición o explosión de la misma.

Safety notice 4

⚠ **DANGER**

The lithium battery can cause a fire, an explosion, or a severe burn. Do not recharge it, remove its polarized connector, disassemble it, heat it above 100°C (212°F), incinerate it, or expose its cell contents to water. Dispose of the battery as required by local ordinances or regulations. Use only the battery in the appropriate parts listing. Use of an incorrect battery can result in ignition or explosion of the battery.

La pile de sauvegarde contient du lithium. Elle présente des risques d’incendie, d’explosion ou de brûlures graves. Ne la rechargez pas, ne retirez pas son connecteur polarisé et ne la démontez pas. Ne l’exposez pas à une temperature supérieure à 100°C, ne la faites pas brûler et n’en exposez pas le contenu à l’eau. Mettez la pile au rebut conformément à la réglementation en vigueur. Une pile inappropriée risque de prendre feu ou d’exploser.

Die Systembatterie ist eine Lithiumbatterie. Sie kann sich entzünden, explodieren oder schwere Verbrennungen hervorrufen. Batterien dieses Typs dürfen nicht aufgeladen, zerlegt, über 100 C erhitzt oder verbrannt werden. Auch darf ihr Inhalt nicht mit Wasser in Verbindung gebracht oder der zur richtigen Polung angebrachte Verbindungsstecker entfernt werden. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Beim Ersetzen der Batterie nur Batterien des Typs verwenden, der in der Ersatzteilliste aufgeführt ist. Der Einsatz falscher Batterien kann zu Entzündung oder Explosion führen.

סוללת הליתיום עלולה לגרום לשריפה, להתפוצצות או לכוויות קשות. אין לטעון אותה מחדש, לסלק את המחבר המקוטב שלה, לפרק אותה או לחמם אותה לטמפרטורה העולה על 100 מעלות צלזיוס. אין לשרוף את הסוללה ואין לחשוף את תוכן התא למים. יש לסלק את הסוללה כנדרש בתקנות ובחוקים המקומיים. יש להשתמש רק בסוללה המופיעה ברשימת החלקים המתאימים. שימוש בסוללה אחרת עלול לגרום לסכנת שריפה או התפוצצות.

La batteria di supporto e una batteria al litio e puo incendiarsi, esplodere o procurare gravi ustioni. Evitare di ricaricarla, smontarne il connettore polarizzato, smontarla, riscaldarla ad una temperatura superiore ai 100 gradi centigradi, incendiarla o gettarla in acqua. Smaltirla secondo la normativa in vigore (DPR 915/82, successive disposizioni e disposizioni locali). L’impiego di una batteria non adatta potrebbe determinare l’incendio o l’esplosione della batteria stessa.

リチウム・バッテリーは、火災、爆発、または重症のやけどを引き起こすことがあります。バックアップ・バッテリーの充電、その極性コネクターの取り外し、バッテリー本体の分解、
100 ℃ (212 ˚F) 以上への加熱、焼却、電池の中身を水に浸すことはしないでください。バッテリーを廃棄する場合は地方自治体の条例に従ってください。適切なパーツ・リストにあるバッテリーだけを使用してください。誤ったバッテリーを使用すると、バッテリーが発火したり、爆発したりすることがあります。

La batería de repuesto es una batería de litio y puede provocar incendios, explosiones o quemaduras graves. No la recargue, ni quite el conector polarizado, ni la desmonte, ni caliente por encima de los 100°C (212°F), ni la incinere ni exponga el contenido de sus celdas al agua. Deséchela tal como dispone la normativa local.

Safety notice 5

If the LCD breaks and the fluid from inside the LCD gets into your eyes or on your hands, immediately wash the affected areas with water at least for 15 minutes. Seek medical care if any symptoms caused by the fluid are present after washing.

Si le panneau d’affichage à cristaux liquides se brise et que vous recevez dans les yeux ou sur les mains une partie du fluide, rincez-les abondamment pendant au moins quinze minutes. Consultez un médecin si des symptômes persistent après le lavage.

Die Leuchtstoffröhre im LCD-Bildschirm enthält Quecksilber. Bei der Entsorgung die örtlichen Bestimmungen für Sondermüll beachten. Der LCD-Bildschirm besteht aus Glas und kann zerbrechen, wenn er unsachgemäß behandelt wird oder der Computer auf den Boden fällt. Wenn der Bildschirm beschädigt ist und die darin befindliche Flüssigkeit in Kontakt mit Haut und Augen gerät, sollten die betroffenen Stellen mindestens 15 Minuten mit Wasser abgespült und bei Beschwerden anschließend ein Arzt aufgesucht werden.

אם מסך הגביש הנוזלי (LCD) נשבר והנוזל מתוך המסך בא במגע עם עיניכם או ידיכם, שטפו את האזורים הנגועים מיד במים במשך 15 דקות לפחות. פנו לקבלת עזרה רפואית אם תסמינים הנובעים מהמגע עם הנוזל נמשכים לאחר השטיפה.

Nel caso che caso l’LCD si dovesse rompere ed il liquido in esso contenuto entrasse in contatto con gli occhi o le mani, lavare immediatamente le parti interessate con acqua corrente per almeno 15 minuti; poi consultare un medico se i sintomi dovessero permanere.

LCD が破損し、 LCD の中の液体が目に入ったり、手に触れたりした場合は、液体が触れた部分を少なくとも 15 分間洗い流してください。洗い流した後に、液体によって何らかの症状が現れた場合は、医師の治療を受けてください。

Si la LCD se rompe y el fluido de su interior entra en contacto con sus ojos o sus manos, lave inmediatamente las áreas afectadas con agua durante 15 minutos como mínimo. Obtenga atención medica si se presenta algún síntoma del fluido despues de lavarse.

Safety notice 6

⚠ **DANGER**

To avoid shock, do not remove the plastic cover that protects the lower part of the inverter card.

Afin d’éviter tout risque de choc électrique, ne retirez pas le cache en plastique protégeant la partie inférieure de la carte d’alimentation.

Aus Sicherheitsgründen die Kunststoffabdeckung, die den unteren Teil der Spannungswandlerplatine umgibt, nicht entfernen..

כדי למנוע התחשמלות, אין להסיר את מכסה הפלסטיק
המגן על חלקו התחתון של הכרטיס ההפוך.

Per evitare scosse elettriche, non rimuovere la copertura in plastica che avvolge la parte inferiore della scheda invertitore.

感電を防ぐため、インバーター・カードの下部を保護しているプラスチック・カバーを外さないでください。

Para evitar descargas, no quite la cubierta de plástico que rodea la parte baja de la tarjeta invertida.

Safety notice 7

⚠ **DANGER**

Though the main batteries have low voltage, a shorted or grounded battery can produce enough current to burn personnel or combustible materials.

Bien que le voltage des batteries principales soit peu élevé, le court-circuit ou la mise à la masse d’une batterie peut produire suffisamment de courant pour brûler des matériaux combustibles ou causer des brûlures corporelles graves.

Obwohl Hauptbatterien eine niedrige Spannung haben, können sie doch bei Kurzschluß oder Erdung genug Strom abgeben, um brennbare Materialien zu entzünden oder Verletzungen bei Personen hervorzurufen.

אף שהסוללות הראשיות הן בעלות מתח נמוך, סוללה
מקוצרת או מוארקת עלולה להפיק זרם מספיק לגרימת
כוויות או להצתת חומרים דליקים.

Sebbene le batterie di alimentazione siano a basso voltaggio, una batteria in corto circuito o a massa può fornire corrente sufficiente da bruciare materiali combustibili o provocare ustioni ai tecnici di manutenzione.

メイン・バッテリーの電圧は低くても、ショートしたり、接地したバッテリーが、作業者にやけどを負わせたり、可燃物を燃やすだけの電流を発生させる場合があります。

Aunque las baterías principales tienen un voltaje bajo, una batería cortocircuitada o con contacto a tierra puede producir la corriente suficiente como para quemar material combustible o provocar quemaduras en el personal.

Safety notice 8

⚠ DANGER

Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any interconnecting cables.

Avant de retirer une unité remplaçable en clientèle, mettez le système hors tension, débranchez tous les cordons d’alimentation des socles de prise de courant, retirez la batterie et déconnectez tous les cordons d’interface.

Die Stromzufuhr muß abgeschaltet, alle Stromkabel aus der Steckdose gezogen, der Akku entfernt und alle Verbindungskabel abgenommen sein, bevor eine FRU entfernt wird.

לפני סילוק FRU כלשהו, יש לכבות את המחשב, לנתק את כל כבלי החשמל משקעי החשמל, להוציא את מארז הסוללה, ואז לנתק כבלי חיבור אחרים אם יש כאלה.

Prima di rimuovere qualsiasi FRU, spegnere il sistema, scollegare dalle prese elettriche tutti i cavi di alimentazione, rimuovere la batteria e poi scollegare i cavi di interconnessione.

FRU を取り外す前に、 ThinkPad の電源を切って、すべての電源コードをコンセントから外してください。次に、バッテリー・パックを外し、相互接続ケーブルを外してください。

Antes de quitar una FRU, apague el sistema, desenchufe todos los cables de las tomas de corriente eléctrica, quite la batería y, a continuación, desconecte cualquier cable de conexión entre dispositivos.

Laser compliance statement

Some models of Lenovo IdeaPad computer are equipped from the factory with an optical storage device such as a CD-ROM drive or a DVD-ROM drive. Such devices are also sold separately as options. If one of these drives is installed, it is certified in the U.S. to conform to the requirements of the Department of Health and Human Services 21 Code of Federal Regulations (DHHS 21 CFR) Subchapter J for Class 1 laser products. Elsewhere, the drive is certified to conform to the requirements of the International Electrotechnical Commission (IEC) 825 and CENELEC EN 60 825 for Class 1 laser products.

If a CD-ROM drive, a DVD-ROM drive, or another laser device is installed, note the following:

⚠ **CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein might result in hazardous radiation exposure.

O uso de controles, ajustes ou desempenho de procedimentos diferentes daqueles aqui especificados pode resultar em perigosa exposição à radiação.

凡未在这里指明的任何控制用法、调整、行为，都会导致严重后果。

Pour éviter tout risque d'exposition au rayon laser, respectez les consignes de réglage et d'utilisation des commandes, ainsi que les procédures décrites.

Werden Steuer- und Einstellelemente anders als hier festgesetzt verwendet, kann gefährliche Laserstrahlung auftreten.

Az itt előírt eljárásoktól, beállításoktól és vezérlésektől eltérni a lézersugárzás veszélye miatt kockázatos !

L'utilizzo di controlli, regolazioni o l'esecuzione di procedure diverse da quelle specificate possono provocare l'esposizione a.

Использование элементов настройки и выполнение процедур иных, чем указано здесь, может привести к опасному радиационному облучению.

Použitie kontrôl, úprav alebo iných vykonaní od iných výrobcov, ako je v tomto špecifikované, mohlo by mať za následok nebezpečenstvo vystavenia sa vyžiarovaniu.

本書で指定された内容以外の、お客様による整備、調整、または手順を行った場合、レーザー光の放射の危険があります。

El uso de controles o ajustes o la ejecución de procedimientos distintos de los aquí especificados puede provocar la exposición a radiaciones peligrosas.

Opening the CD-ROM drive, the DVD-ROM drive, or any other optical storage device could result in exposure to hazardous laser radiation. There are no serviceable parts inside those drives. **Do not open.**

A CD-ROM drive, a DVD-ROM drive, or any other storage device installed may contain an embedded Class 3A or Class 3B laser diode. Note the following:

⚠ DANGER

Emits visible and invisible laser radiation when open. Do not stare into the beam, do not view directly with optical instruments, and avoid direct exposure to the beam.

Radiação por raio laser ao abrir. Não olhe fixo no feixe de luz, não olhe diretamente por meio de instrumentos óticos e evite exposição direta com o feixe de luz..

开启时会有激光发射时，请勿盯视激光光束，请勿直接查看视觉仪器，并且避免直接接触在激光光束之中。

Rayonnement laser si carter ouvert. Évitez de fixer le faisceau, de le regarder directement avec des instruments optiques, ou de vous exposer au rayon.

Laserstrahlung bei geöffnetem Gerät. Nicht direkt oder über optische Instrumente in den Laserstrahl sehen und den Strahlungsbereich meiden.

Kinyitáskor lézersugár ! Ne nézzen bele se szabad szemmel, se optikai eszközökkel. Kerülje a sugárnyalábbal való érintkezést!

Aprendo l’unità vengono emesse radiazioni laser. Non fissare il fascio, non guardarlo direttamente con strumenti ottici e evitare l’esposizione diretta al fascio.

Открывая, берегитесь лазерного излучения. Не смотрите на луч, не разглядывайте его с помощью оптических инструментов, а также избегайте прямого воздействия лазерного луча.

Keď je laserová jednotka otvorená. Vyhnite sa priamemu pohľadu a nehľadte priamo s optickými nástrojmi do ľúča a vyhnite sa priamemu vystaveniu ľúčov.

開けるとレーザー光が放射されます。光線を見つめたり、光学機械を使って直接見たりしないでください。

Radiación láser al abrir. No mire fijamente ni examine con instrumental óptico el haz de luz. Evite la exposición directa al haz.

Important service information

This chapter presents the following important service information:

> **Important:**
> BIOS and device driver fixes are customer-installable. The BIOS and device drivers are posted on the customer support site:
> http://consumersupport.lenovo.com/.

Strategy for replacing FRUs

Before replacing parts:
Make sure that all software fixes, drivers, and BIOS downloads are installed before replacing any FRUs listed in this manual.
After a system board is replaced, ensure that the latest BIOS is loaded to the system board before completing the service action.
To download software fixes, drivers, and BIOS, follow the steps below:
1. Go to http://consumersupport.lenovo.com/.
2. Enter a serial number or select a product or use Lenovo smart downloading.
3. Select the BIOS/Driver/Applications and download.
4. Follow the directions on the screen and install the necessary software.

Use the following strategy to prevent unnecessary expense for replacing and servicing FRUs:
- If you are instructed to replace an FRU, but the replacement does not solve the problem, reinstall the original FRU before you continue.
- Some computers have both a processor board and a system board. If you are instructed to replace either of them, and replacing one of them does not solve the problem, reinstall that board, and then replace the other one.
- If an adapter or a device consists of more than one FRU, any of the FRUs may be the cause of the error. Before replacing the adapter or device, remove the FRUs one by one to see if the symptoms change. Replace only the FRU that changed the symptoms.

Attention: The setup configuration on the computer you are servicing may have been customized. Running Automatic Configuration may alter the settings. Note the current configuration settings (using the View Configuration option); then, when service has been completed, verify that those settings remain in effect.

Strategy for replacing a hard disk drive

Always try to run a low-level format before replacing a hard disk drive. This will cause all customer data on the hard disk to be lost. Make sure that the customer has a current backup of the data before performing this action.
Attention: The drive startup sequence in the computer you are servicing may have been changed. Be extremely careful during write operations such as copying, saving, or formatting. If you select an incorrect drive, data or programs can be overwritten.

Important notice for replacing a system board

Some components mounted on a system board are very sensitive. Improper handling can cause damage to those components, and may cause a system malfunction.
Attention: When handling a system board:

- Do not drop the system board or apply any excessive force to it.
- Avoid rough handling of any kind.
- Avoid bending the system board and hard pushing to prevent cracking at each BGA (Ball Grid Array) chipset.

Important information about replacing RoHS compliant FRUs

RoHS, The Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (2002/95/EC) is a European Union legal requirement affecting the global electronics industry. RoHS requirements must be implemented on Lenovo products placed on the market after June 2006. Products on the market before June 2006 are not required to have RoHS compliant parts. If the original FRU parts are non-compliant, replacement parts can also be non-compliant. In all cases if the original FRU parts are RoHS compliant, the replacement part must also be RoHS compliant.

Note: RoHS and non-RoHS FRU part numbers with the same fit and function are identified with unique FRU part numbers.

Lenovo plans to transit to RoHS compliance well before the implementation date and expects its suppliers to be ready to support Lenovo's requirements and schedule in the EU. Products sold in 2005 and 2006 will contain some RoHS compliant FRUs. The following statement pertains to these products and any product Lenovo produces containing RoHS compliant FRUs.

RoHS compliant FRUs have unique FRU part numbers. Before or after the RoHS implementation date, failed RoHS compliant parts must always be replaced with RoHS compliant ones, so only the FRUs identified as compliant in the system HMM or direct substitutions for those FRUs may be used.

<table>
<tr><th colspan="2">Products marketed before June 2006</th><th colspan="2">Products marketed after June 2006</th></tr>
<tr><th>Current or original part</th><th>Replacement FRU</th><th>Current or original part</th><th>Replacement FRU</th></tr>
<tr><td>Non-RoHS</td><td>Can be Non-RoHS</td><td rowspan="4">Must be RoHS</td><td rowspan="4">Must be RoHS</td></tr>
<tr><td>Non-RoHS</td><td>Can be RoHS</td></tr>
<tr><td>Non-RoHS</td><td>Can sub to RoHS</td></tr>
<tr><td>RoHS</td><td>Must be RoHS</td></tr>
</table>

Note: A direct substitution is a part with a different FRU part number that is automatically shipped by the distribution center at the time of the order.

General checkout

This chapter presents the following information:

- "What to do first" on page 17
- "Power system checkout" on page 18

Before you go to the checkout, make sure to read the following important notes:

Notes:
- Only certified trained personnel can service the computer.
- Before replacing any FRU, read the entire page on removing and replacing FRUs.
- When you replace FRUs, use new nylon-coated screws.
- Be extremely careful during such write operations as copying, saving, or formatting. Drives in the computer that you are servicing sequence might have been altered. If you select an incorrect drive, data or programs might be overwritten.
- Replace an FRU only with another FRU of the correct model. When you replace an FRU, make sure that the machine model and the FRU part number are correct by referring to the FRU parts list.
- An FRU should not be replaced just because of a single, unreproducible failure. Single failures can occur for a variety of reasons that have nothing to do with a hardware defect, such as cosmic radiation, electrostatic discharge, or software errors. Consider replacing an FRU only when a problem recurs. If you suspect that an FRU is defective, clear the error logs and run the test again. If the error does not recur, do not replace the FRU.
- Be careful not to replace a nondefective FRU.

What to do first

When you do return an FRU, you must include the following information in the parts exchange form or parts return form that you attach to it:

1. Name and phone number of servicer
2. Date of service
3. Date on which the machine failed
4. Date of purchase
5. Procedure index and page number in which the failing FRU was detected
6. Failing FRU name and part number
7. Machine type, model number, and serial number
8. Customer's name and address

Note for warranty: During the warranty period, the customer may be responsible for repair costs if the computer damage was caused by misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by the customer.

The following is a list of some common items that are not covered under warranty and some symptoms that might indicate that the system was subjected to stress beyond normal use.
Before checking problems with the computer, determine whether the damage is covered under the warranty by referring to the following list:

The following are not covered under warranty:
- LCD panel cracked from the application of excessive force or from being dropped
- Scratched (cosmetic) parts
- Distortion, deformation, or discoloration of the cosmetic parts
- Plastic parts, latches, pins, or connectors that have been cracked or broken by excessive force
- Damage caused by liquid spilled into the system
- Damage caused by the improper insertion of a PC Card or the installation of an incompatible card
- Improper disc insertion or use of an optical drive
- Diskette drive damage caused by pressure on the diskette drive cover, foreign material in the drive, or the insertion of a diskette with multiple labels
- Damaged or bent diskette eject button
- Fuses blown by attachment of a nonsupported device
- Forgotten computer password (making the computer unusable)
- Sticky keys caused by spilling a liquid onto the keyboard
- Use of an incorrect AC adapter on laptop products

The following symptoms might indicate damage caused by nonwarranted activities:
- Missing parts might be a symptom of unauthorized service or modification.
- If the spindle of a hard disk drive becomes noisy, it may have been subjected to excessive force, or dropped.

Power system checkout

To verify a symptom, follow the steps below:
1. Turn off the computer.
2. Remove the battery pack.
3. Connect the AC adapter.
4. Make sure that power is supplied when you turn on the computer.
5. Turn off the computer.
6. Disconnect the AC adapter and install the charged battery pack.
7. Make sure that the battery pack supplies power when you turn on the computer.

If you suspect a power problem, see the appropriate one of the following power supply checkouts:

- “Checking the AC adapter” on page 19
- “Checking operational charging” on page 19
- “Checking the battery pack” on page 19

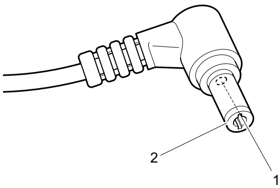
Checking the AC adapter

You are here because the computer fails only when the AC adapter is used.

- If the power-on indicator does not turn on, check the power cord of the AC adapter for correct continuity and installation.
- If the computer does not charge during operation, go to “Checking operational charging”.

To check the AC adapter, follow the steps below:

1. Unplug the AC adapter cable from the computer.
2. Measure the output voltage at the plug of the AC adapter cable. See the following figure:



Pin	Voltage (V DC)
1	+20
2	0

Note: Output voltage for the AC adapter pin No. 2 may differ from the one you are servicing.

3. If the voltage is not correct, replace the AC adapter.
4. If the voltage is acceptable, do the following:

- Replace the system board.
- If the problem continues, go to “Lenovo IdeaPad S110” on page 24.

Note: Noise from the AC adapter does not always indicate a defect.

Checking operational charging

To check whether the battery charges properly during operation, use a discharged battery pack or a battery pack that has less than 50% of the total power remaining when installed in the computer.

Perform operational charging. If the battery status indicator or icon does not light on, remove the battery pack and let it return to room temperature. Reinstall the battery pack. If the charge indicator or icon is still off, replace the battery pack.

If the charge indicator still does not light on, replace the system board. Then reinstall the battery pack. If it is still not charged, go to the next section.

Checking the battery pack

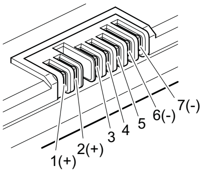
Battery charging does not start until the Power Meter shows that less than 95% of the total power remains; under this condition the battery pack can charge to 100% of its capacity. This protects the battery pack from being overcharged or from having a shortened life.

To check your battery, move your cursor to the Power Meter icon in the icon tray of the Windows® taskbar and wait for a moment (but do not click it), and the

percentage of battery power remaining is displayed. To get detailed information about the battery, double-click the Power Meter icon.

Note: If the battery pack becomes hot, it may not be able to be charged. Remove it from the computer and leave it at room temperature for a while. After it cools down, reinstall and recharge it.

To check the battery pack, follow the steps below:
1. Turn off the computer.
2. Remove the battery pack and measure the voltage between battery terminals 1 (+) and 7 (-). See the following figure:



Terminal	Voltage (V DC)
1	+0 to +14
7	Ground (-)

3. If the voltage is less than +11.0 V DC, the battery pack has been discharged.
   Note: Recharging will be continued for at least 3 hours, even though the indicator does not light on.
   If the voltage is still less than +11.0 V DC after recharging, replace the battery.
4. If the voltage is more than +11.0 V DC, measure the resistance between battery terminals 5 and 7. The resistance must be 4 to 30 KΩ.
   If the resistance is not correct, replace the battery pack. If the resistance is correct, replace the system board.

Related service information

This chapter presents the following information:

Restoring the factory contents by using OneKey Recovery

Restore of factory default

The Lenovo IdeaPad S110 computers come with pre-installed OneKey Rescue System. In order to save application files and the initial backed up files of the system, the hard disk in a Lenovo computer includes a hidden partition when it is shipped. If you need to restore the system to the point of your first boot up, just enter Lenovo OneKey Rescue System and run **Restore to factory default**. For details of OneKey Rescue System, see *the User Guide for OneKey Rescue System*.

Note:
This will delete all the new data on the system partition (C drive), which is not recoverable. Make sure to back up your critical data before you perform this action.

Using recovery discs

When you replace a hard disk drive in your computer, you are unable to use the pre-installed Lenovo OneKey Recovery and OneKey Rescue. However, you can use the recovery discs that store your backed up data to restore your new hard drive to a previous backup status.

Note:
You can create recovery discs by burning the backup image to a CD/DVD as recovery discs. For details of **Create recovery discs**, see *the User Guide for OneKey Rescue System*.

When you use the recovery discs to boot your computer, the system will enter the user interface for system recovery automatically. Please follow the prompt to insert the backup discs to complete the whole recovery process.

Note:
The recovery process might take up to 2 hours.

Passwords

As many as two passwords may be needed for any Lenovo IdeaPad computer: the power-on password (POP) and the supervisor password (SVP).
If any of these passwords has been set, a prompt for it appears on the screen whenever the computer is turned on. The computer does not start until the password is entered.
Exception: If only an SVP is installed, the password prompt does not appear when the operating system is booted.

Power-on password

A power-on password (POP) protects the system from being powered on by an unauthorized person. The password must be entered before an operating system can be booted.

Supervisor password

A supervisor password (SVP) protects the system information stored in the BIOS Setup Utility. The user must enter the SVP in order to get access to the BIOS Setup Utility and change the system configuration.

Attention: If the SVP has been forgotten and cannot be made available to the servicer, there is no service procedure to reset the password. The system board must be replaced for a scheduled fee.

Power management

Note: Power management modes are not supported for APM operating system.

To reduce power consumption, the computer has three power management modes: screen blank, sleep (standby), and hibernation.

Screen blank mode

If the time set on the “Turn off monitor” timer in the operating system expires, the LCD backlight turns off. You can also turn off the LCD backlight by pressing Fn+F2.

To end screen blank mode and resume normal operation, press any key.

Sleep (standby) mode

When the computer enters sleep (standby) mode, the following events occur in addition to what occurs in screen blank mode:

- The LCD is powered off.
- The hard disk drive is powered off.
- The CPU stops.

To enter sleep (standby) mode, press Fn+F1.

In certain circumstances, the computer goes into sleep (standby) mode automatically:

- If a “suspend time” has been set on the timer, and the user does not do any operation with the keyboard, the hard disk, the parallel connector, or the diskette drive within that time.
- If the battery indicator is amber, indicating that the battery power is low. (Alternatively, if **Hibernate when battery becomes low** has been selected in the “Power Management Properties” window, the computer goes into hibernation mode.)

To cause the computer to return from sleep (standby) mode and resume the operation, do one of the following:
- Press the Fn key.
- Open the lid.
- Turn on the power switch.

Also, in the following event, the computer automatically returns from sleep (standby) mode and resumes the operation:
- The time set on the resume timer elapses.

Note: The computer does not accept any input immediately after it enters sleep (standby) mode. Wait a few seconds before taking any action to reenter operation mode.

Hibernation mode

In hibernation mode, the following occurs:
- The system status, RAM, VRAM, and setup data are stored on the hard disk.
- The system is powered off.

To cause the computer to enter hibernation mode, follow the steps below:
- If you are using the ACPI operating system and have defined one of the following actions as the event that causes the system to go into hibernation mode, perform that action:
  – Closing the lid.
  – Pressing the power button.

Also, the computer goes into hibernation mode automatically in either of the following conditions:
- If a “hibernation time” has been set on the timer, and if the user does not do any operation with the keyboard, the hard disk drive, the parallel connector, or the diskette drive within that time.
- If the timer conditions are satisfied in suspend mode.

When the power is turned on, the computer returns from hibernation mode and resumes operation. The hibernation file in the boot record on the hard disk drive is read, and system status is restored from the hard disk drive.

Lenovo IdeaPad S110

This chapter presents the following product-specific service references and product-specific parts information:

Specifications

The following table lists the specifications of the Lenovo IdeaPad S110:

Table 1.Specifications

Feature	Description
Processor	• Intel® Atom™ N455 (1.66 GHz) • Intel® Atom™ N570 (1.66 GHz, Dual Core) • Intel® Atom™ N435 (1.33 GHz)
South Bridge Chipset	Intel NM10 Express
Bus architecture	• 667 MHz FSB • PCI • PCI Express • DMI
Graphics	Intel integrated graphics
Display	10.1-inch, flat type LED backlight, 1024 x 600 pixels
Memory	• DDR3-800/1066MHz, 1GB or 2GB • One memory slot, 2GB maximum capacity
CMOS RAM	256 Bytes
Hard disk drive	• 250GB, 5400rpm (2.5-inch, 7mm or 9.5mm, SATA II) • 320GB, 5400rpm (2.5-inch, 7mm or 9.5mm, SATA II) • 500GB, 5400rpm (2.5-inch, 9.5mm, SATA II)
I/O port	• USB2.0 x 3 or USB2.0 x 2 + USB3.0 x 1 • VGA port X 1 • RJ-45 port X 1 • Combo audio port X 1 • 2-in-1 (SD, MMC) memory slot

Table 1.Specifications (Continued)

Feature	Description
Integrated audio	• Built-in stereo microphone • Built-in speakers
Ethernet chip	Realtek RTL8105E-GR, 10/100 Mbps
WLAN/WiMAX card	• Intel 622ANXHMW • Intel 612BNxHMW • Atheros AR5B95 • Realtek RTL8188CE
WLAN/ Bluetooth combo card	• Atheros AR5B195 • Realtek RTL8188CEBT
Integrated camera	Fixed-focus CMOS, 0.3 or 2.0 Mega pixels
Battery	Lithium-ion, 2200mAH (3-cell) or 4400mAH (6-cell)
AC adapter	• Input 100 - 240V, 50 - 60Hz AC • 3-pin, 30W or 40W • Output 19V DC
Preloaded operating system	• Windows 7 Starter • Windows 7 Home Basic • MeeGo • Free DOS

Status indicators

The system status indicators below show the computer status:



Table 2.Status indicators

No.	Symbol	Indicator	Indicator status	Meaning
1	⏻	Power	On (solid white)	The computer is powered on.
			Blinking	Blinking The computer is in sleep mode.
			Off	The computer is powered off.

Table 2.Status indicators (Continued)

No.	Symbol	Indicator	Indicator status	Meaning
2		Battery	On (solid white)	The battery has more than 20% charge.
			Solid amber	The battery has between 5% and 20% charge.
			Fast blinking amber	The battery has less than 5% charge.
			Slow blinking amber	The battery is being charged. When battery charge reaches 20%, the blinking color changes to white.
			Slow blinking white	The battery has between 20% and 80% charge and is still charging. When the battery reaches 80% charge the light will stop blinking, but charging will continue until the battery is fully charged.
			Off	The battery is detached.
3		Device access	Blinking	Data is being read from or written to the hard disk drive or other external storage devices.
4		Wireless	On	Wireless (Bluetooth or wireless network card) is enabled.
			Off	Wireless is disabled.

Fn key combinations

The following table shows the function of each combination of Fn with a function key.

Table 3.Fn key combinations

Fn + Esc:	Turn on/off the integrated camera.
Fn + F1:	Enter sleep mode.
Fn + F2:	Turn on/off the backlight of the LCD screen.
Fn + F3:	Open the interface for the display device switch to select this notebook or an external display.
Fn + F5:	Open the interface for integrated wireless devices settings (On/Off).
Fn + F6:	Enable/Disable the touchpad.
Fn + F7:	Start/Pause playback of Windows Media Player.
Fn + F8:	Stop playback of Windows Media Player.
Fn + F9:	Skip to the previous track.
Fn + F10:	Skip to the next track.
Fn + F11:	F12 key
Fn + PrtSc:	Activate the system request.
Fn + Pause:	Activate the break function.
Fn + Delete:	Enable/Disable the scroll lock.
Fn + PgUp	Home key
Fn + PgDn	End key
Fn + ↑ / ↓	Increase/Decrease display brightness.
Fn + → / ←	Increase/Decrease sound volume.

FRU replacement notices

This section presents notices related to removing and replacing parts. Read this section carefully before replacing any FRU.

Screw notices

Loose screws can cause a reliability problem. In the Lenovo IdeaPad computer, this problem is addressed with special nylon-coated screws that have the following characteristics:

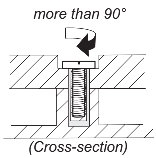
- They maintain tight connections.
- They do not easily come loose, even with shock or vibration.
- They are harder to tighten.
- Each one should be used only once.

Do the following when you service this machine:

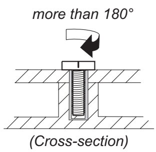
- Keep the screw kit in your tool bag.
- Always use new screws.
- Use a torque screwdriver if you have one.

Tighten screws as follows:

- **Plastic to plastic**
  Turn an additional 90° after the screw head touches the surface of the plastic part:



- **Logic card to plastic**
  Turn an additional 180° after the screw head touches the surface of the logic card:



- **Torque driver**
  If you have a torque screwdriver , refer to the “Torque” column for each step.
- Make sure that you use the correct screws. If you have a torque screwdriver, tighten all screws firmly to the torque shown in the table. **Never use a screw that you removed. Use a new one. Make sure that all screws are tightened firmly.**
- Ensure torque screwdrivers are calibrated correctly following country specifications.

Removing and replacing an FRU

This section presents exploded figures with instructions indicating how to remove and replace an FRU. Make sure to observe the following general rules:

1. Do not attempt to service any computer unless you have been trained and certified. An untrained person may damage parts.
2. Before replacing any FRU, review the “FRU replacement notices” on page 29.
3. Start by removing any FRUs that must be removed to access the failing FRU. Any such FRUs are listed at the top of the page. Remove them in the order in which they are listed.
4. Follow the correct sequence of steps to remove the FRU, as given in the numbers in square boxes by the illustrations.
5. When turning a screw to replace an FRU, turn it in the direction indicated by the arrow in the illustration.
6. When removing an FRU, move it in the direction indicated by the arrow in the figure.
7. To put the new FRU in place carry out the removal procedure in reverse and pay attention to any notes pertaining to replacing the parts. For information about connecting and arranging internal cables, see “Locations” on page 59.
8. When replacing an FRU, use the correct screw as shown in the procedures.

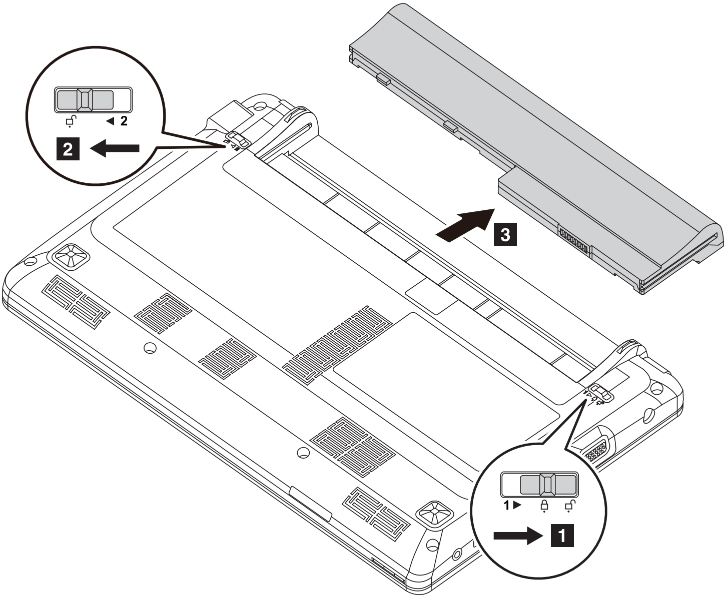
> ⚠ **DANGER**
>
> Before removing any FRU, turn off the computer, unplug all power cords from electrical outlets, remove the battery pack, and then disconnect any of the interconnecting cables.

Attention 1: After replacing an FRU, do not turn on the computer until you have made sure that all screws, springs, and other small parts are in place and none are loose inside the computer. Verify this by shaking the computer gently and listening for rattling sounds. Metallic parts or metal flakes can cause electrical short circuits.

Attention 2: The system board is sensitive to, and can be damaged by, electrostatic discharge. Before touching it, establish personal grounding by touching a ground point with one hand or using an electrostatic discharge (ESD) strap (P/N 6405959) to remove the risk of electrostatic shock.

Battery pack

Figure 1: Removal steps of Battery pack



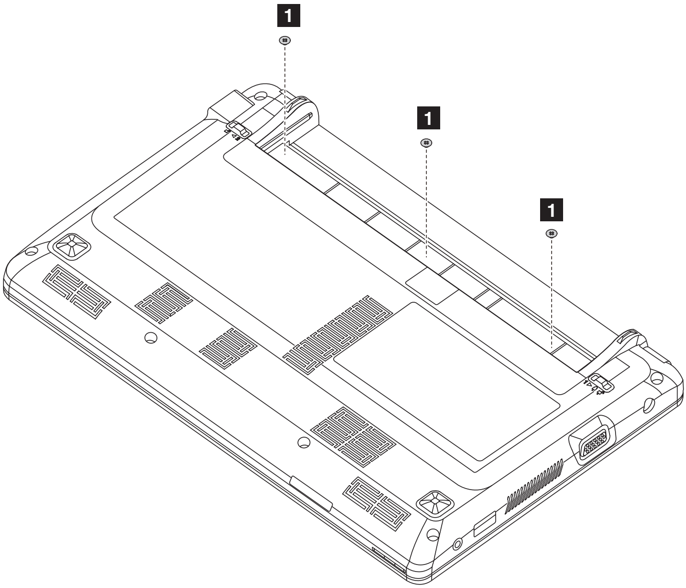
Unlock the battery release slider on the left as shown in 2. Hold the battery release slider on the right lever in the unlocked position 1. Remove the battery pack in the direction shown by arrow 3.

When installing: Install the battery pack using the slide rails of the slot. Then make sure that the battery release sliders are set to the locked position.

Keyboard

For access, remove this FRU:
- “Battery pack” on page 31

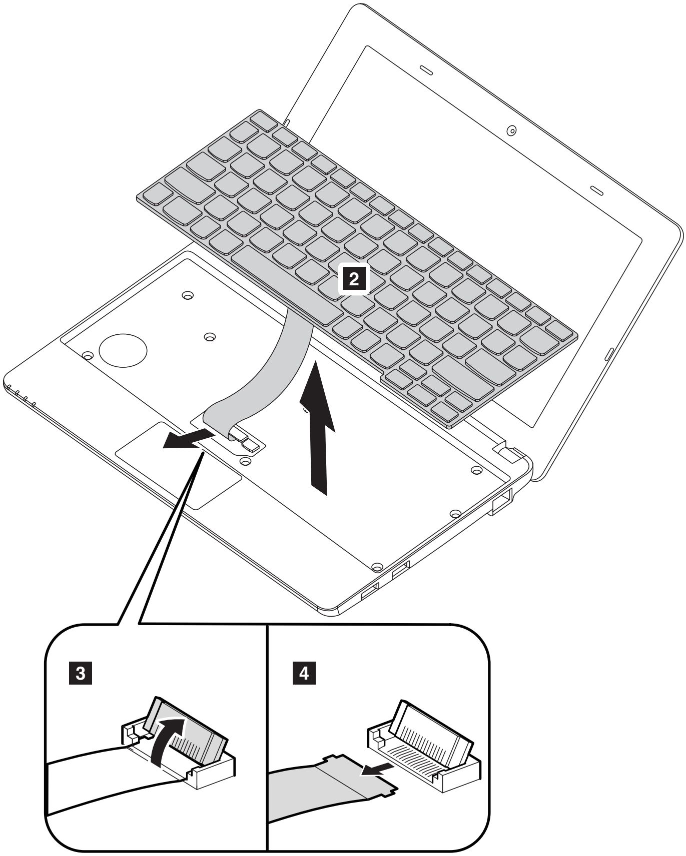
Figure 2: Removal steps of keyboard



Step	Screw (quantity)	Color	Torque
1	M2.0 × 1.7 mm, flat-head, nylon-coated (3)	Black	1.0 kgfcm

Remove the three screws 1.

Figure 3: Removal steps of keyboard (continued)



Lift the keyboard **2**. Unlock the PFC connector **3** and then detach the connector in the direction shown by arrow **4**.

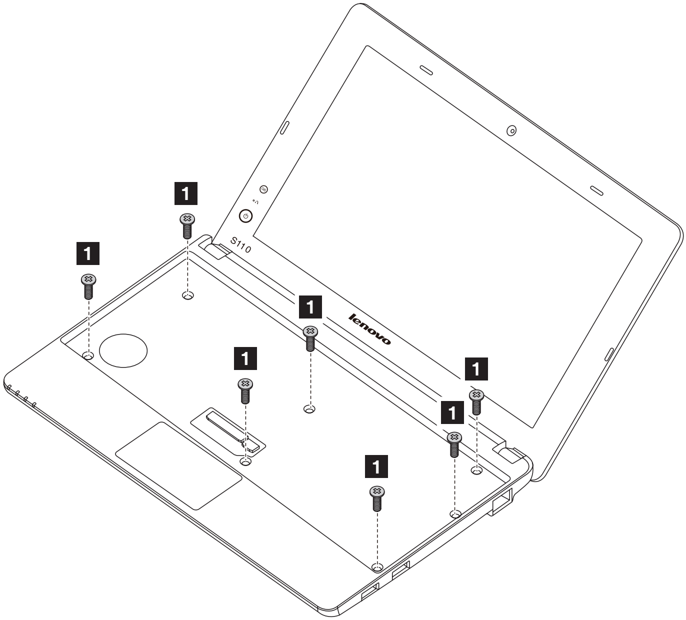
When installing: Make sure that the FPC connector is attached firmly and then lock the FPC connector.

Base cover

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32

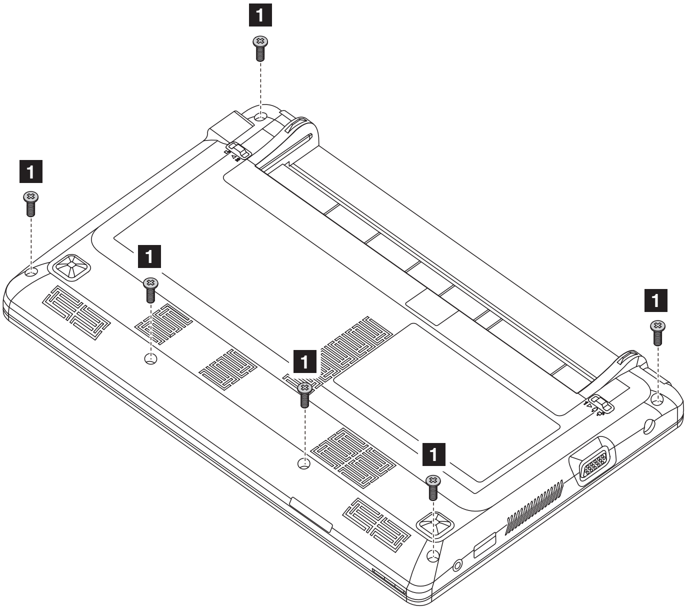
Figure 4: Removal steps of base cover



Step	Screw (quantity)	Color	Torque
1	M2.0 × 6.0 mm, flat round-head, nylon-coated (7)	Black	1.85 kgfcm

Remove the eight screws 1.

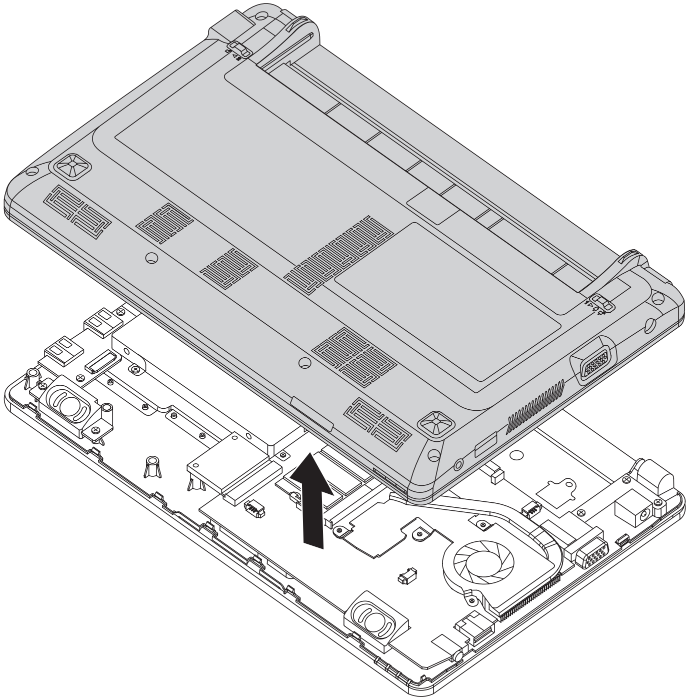
Figure 5: Removal steps of base cover (continued)



Step	Screw (quantity)	Color	Torque
1	M2.0 × 6.0 mm, flat round-head, nylon-coated (6)	Black	1.85 kgfcm

Remove the six screws 1.

Figure 6: Removal steps of base cover (continued)



Lift the base cover as shown by the arrow.

Note: Applying labels to the base cover
The new base cover FRU is shipped with a kit containing several kinds of labels. When you replace the base cover, you need to apply the following labels:

The following labels need to be peeled off from the old base cover and put on the new base cover.

a Windows license label (COA)

b Chinese service information label

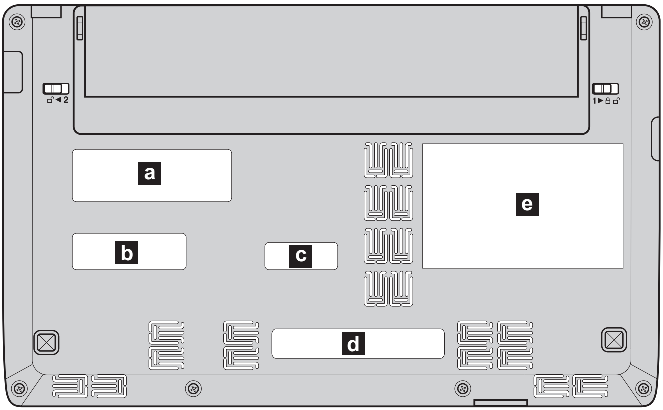
c Homologation label (US/CA/Taiwan)

d Israel label

e Rating label

Refer to the illustration below for the location of each label.

For some models, you also need to apply one or two FCC labels. Check the old base cover; if it has one or two FCC labels, find duplicates of them in the label kit and apply them to the new base cover.

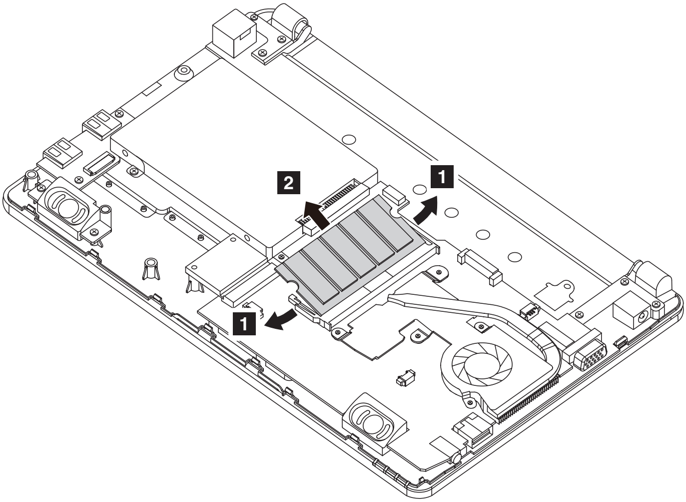


DIMM

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 7: Procedure to remove the DIMM



Release the latches on both edges of the socket at the same time in the direction shown by arrows **1**, and then unplug the DIMM in the direction shown by arrow **2**.

Hard disk drive

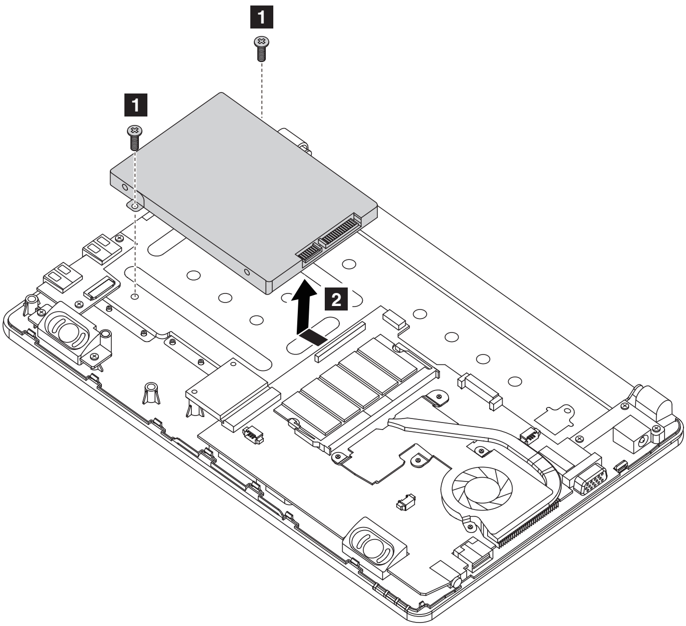
For access, remove these FRUs in order:

- "Battery pack" on page 31
- "Keyboard" on page 32
- "Base cover" on page 34

Attention:

- Do not drop the hard disk drive or apply any physical shock to it. The hard disk drive is sensitive to physical shock. Improper handling can cause damage and permanent loss of data.
- Before removing the drive, suggest to the customer that they should back up all the information on it if possible.
- Never remove the drive while the system is operating or is in suspend mode.

Figure 8: Removal steps of hard disk drive

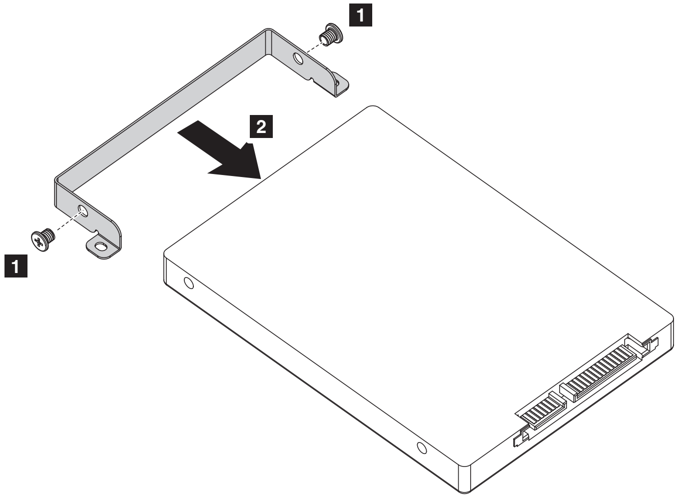


Step	Screws (quantity)	Color	Torque
1	M3.0 × 3.0 mm, flat round-head, nylon-coated (2)	Black	2.85 kgfcm

Remove the two screws 1. Hold the HDD connector with one hand and pull then lift the hard drive disk in the direction shown by arrow 2.

When installing: Make sure that the HDD connector is attached firmly.

Figure 9: Removal steps of hard disk drive (continued)



Step	Screw (quantity)	Color	Torque
1	M3.0 × 3.0 mm, flat round-head, nylon-coated (2)	Black	2.85 kgfcm

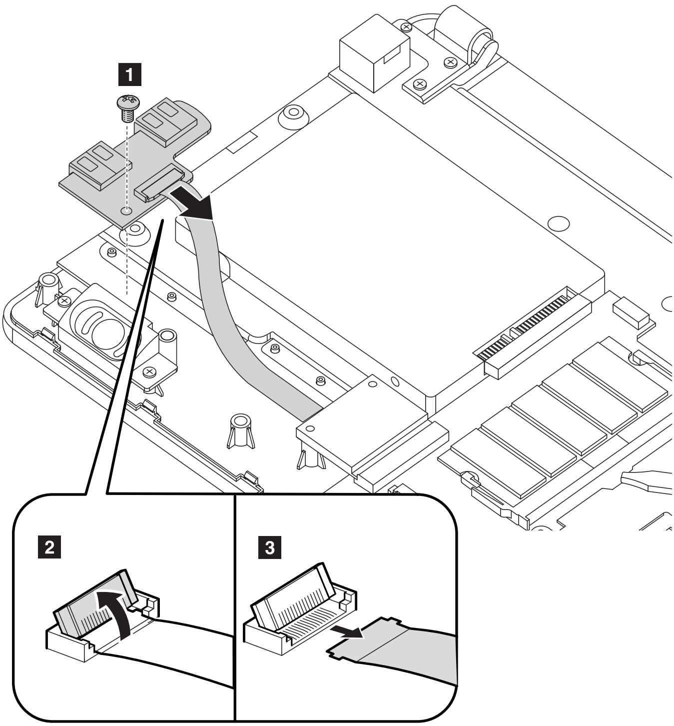
Remove the two side screws 1 and then detach the hard disk drive from its bracket 2.

USB board

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 10: Removal steps of USB port



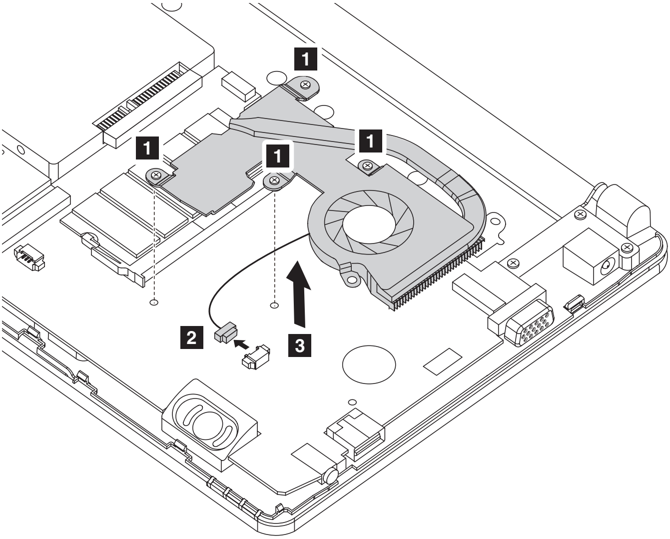
Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (1)	Black	1.35 kgfcm

Remove one screw 1. Unlock the USB connector 2 and then detach the connector in the direction shown by arrow 3. Remove USB port.

Thermal module

For access, remove these FRUs in order:
- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 11: Removal steps of thermal module



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (4)	Black	1.35 kgfcm

Remove the four screws 1. Detach the connector in the direction shown by arrow 2. Lift and remove the thermal module in the direction shown by arrow 3.

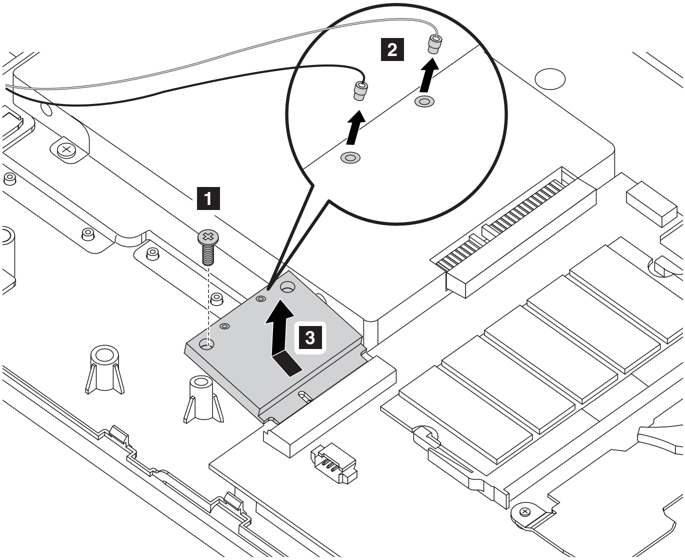
When installing: Make sure that the thermal module connector is attached firmly to the system board.

PCI Express Mini Card for wireless LAN

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 12: Removal steps of PCI Express Mini Card for wireless LAN



Step	Screw (quantity)	Color	Torque
1	M2.0 × 6.0 mm, flat round-head, nylon-coated (1)	Black	1.85 kgfcm

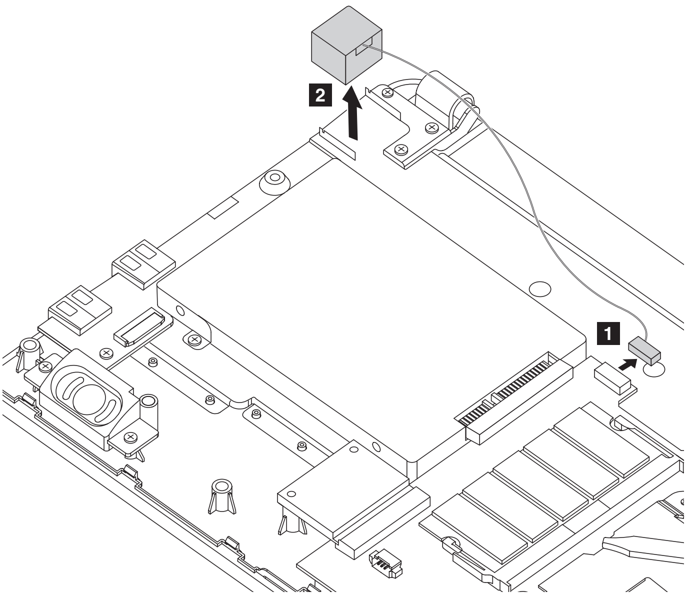
Remove one screw 1. Unplug the two cables 2. Then remove the PCI Express Mini Card in the direction shown by the arrow 3.

RJ-45 connector

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 13: Removal steps of RJ-45 connector



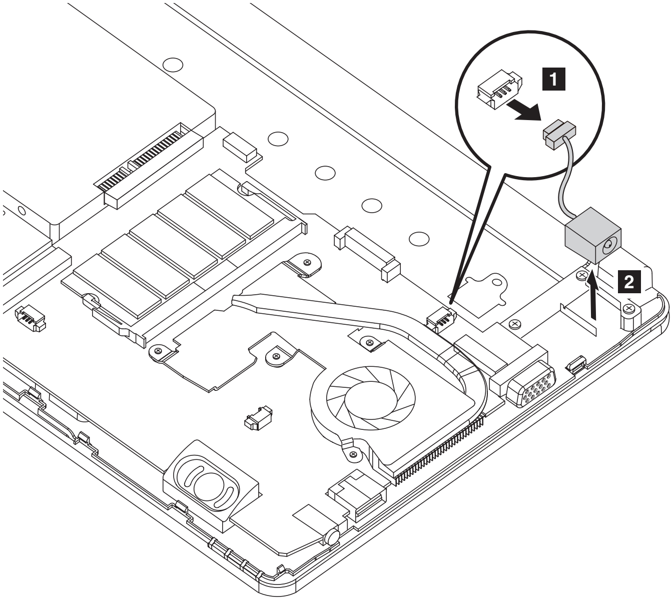
Detach the connector in the direction shown by arrow 1. Lift the RJ-45 connector as shown by arrow 2.

When installing: Make sure that the connector is attached firmly.

Power connector

For access, remove these FRUs in order:
- "Battery pack" on page 31
- "Keyboard" on page 32
- "Base cover" on page 34

Figure 14: Removal steps of power connector



Detach the connector in the direction shown by arrow **1**. Lift the power connector in the direction shown by arrow **2**.

When installing: Make sure that the connector is attached firmly.

System board

Important notices for handling the system board

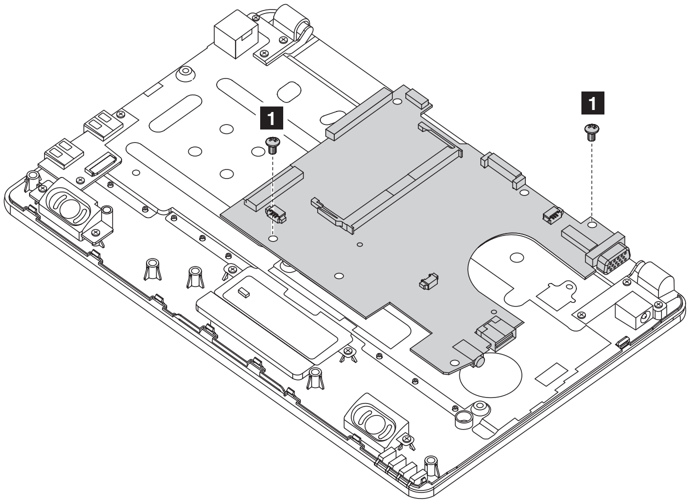
When handling the system board, bear the following in mind:

- Be careful not to drop the system board on a bench top that has a hard surface, such as metal, wood, or composite.
- Avoid rough handling of any kind.
- Take care not to drop or stack the system board during the whole of the procedure.
- If you put a system board down, make sure to put it only on a padded surface such as an ESD mat or conductive corrugated material.

For access, remove these FRUs in order:

- "Battery pack" on page 31
- "Keyboard" on page 32
- "Base cover" on page 34
- "Hard disk drive" on page 39
- "DIMM" on page 38
- "PCI Express Mini Card for wireless LAN" on page 43
- "Thermal module" on page 42

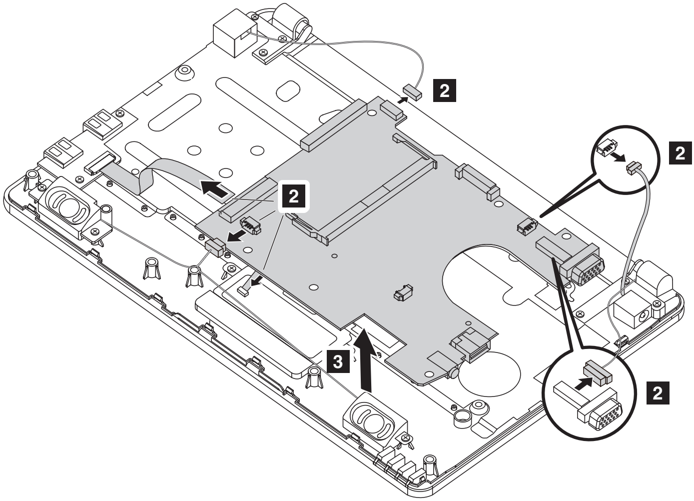
Figure 15: Removal steps of system board



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (2)	Black	1.35 kgfcm

Remove the two screws 1.

Figure 16: Removal steps of system board (continued)



Detach the six connectors in the directions shown by arrows 2. Remove the system board in the direction shown by arrow 3.

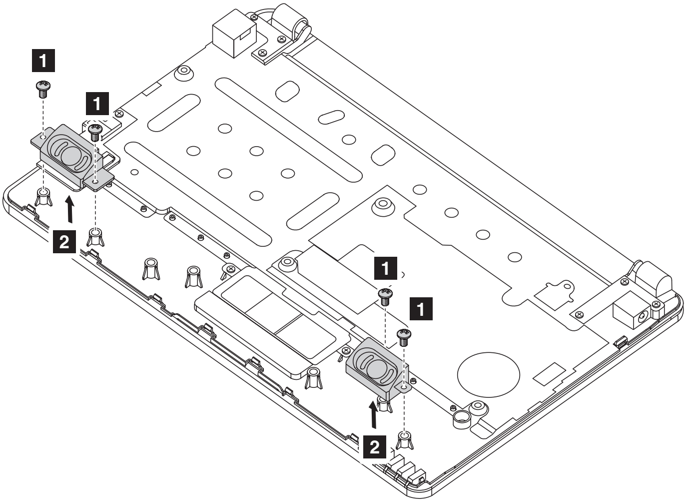
When installing: Make sure that all connectors are attached firmly.

Speakers

For access, remove these FRUs in order:

- "Battery pack" on page 31
- "Keyboard" on page 32
- "Base cover" on page 34
- "Hard disk drive" on page 39
- "PCI Express Mini Card for wireless LAN" on page 43
- "System board" on page 46

Figure 17: Removal steps of speakers



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (4)	Black	1.35 kgfcm

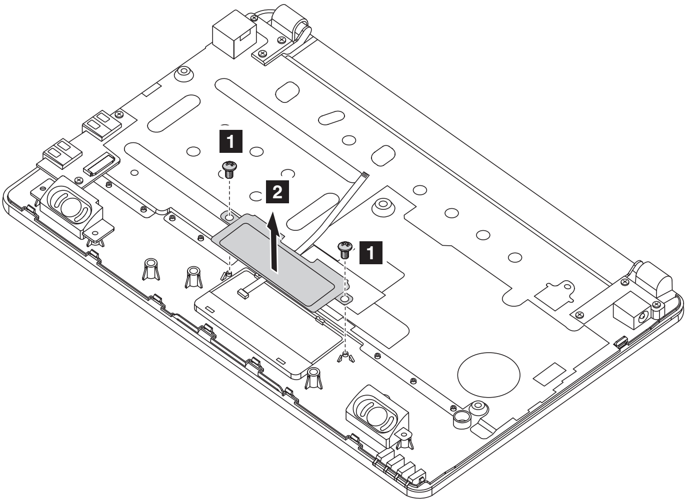
Remove the two side screws 1 for each speaker. Release the speaker cables from the cable guides, and then remove the speakers in the direction shown by arrows 2 .

Touch pad bracket

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “Hard disk drive” on page 39
- “PCI Express Mini Card for wireless LAN” on page 43
- “System board” on page 46

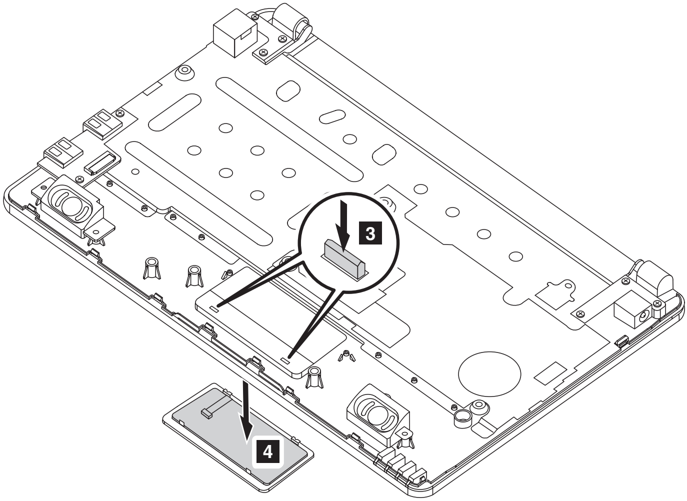
Figure 18: Removal steps of Touch pad bracket



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (2)	Black	1.35 kgfcm

Remove the two screws 1. Remove the metal cover in the direction shown by arrow 2.

Figure 19: Removal steps of Touch pad bracket (continued)



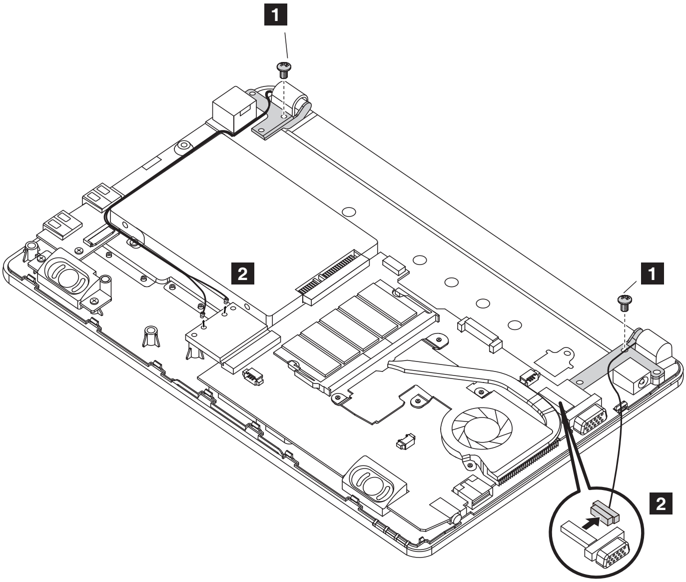
Use a screwdriver to push and unlock the tabs 3. Remove the touch pad bracket in the direction shown by arrow 4 .

LCD unit

For access, remove these FRUs in order:

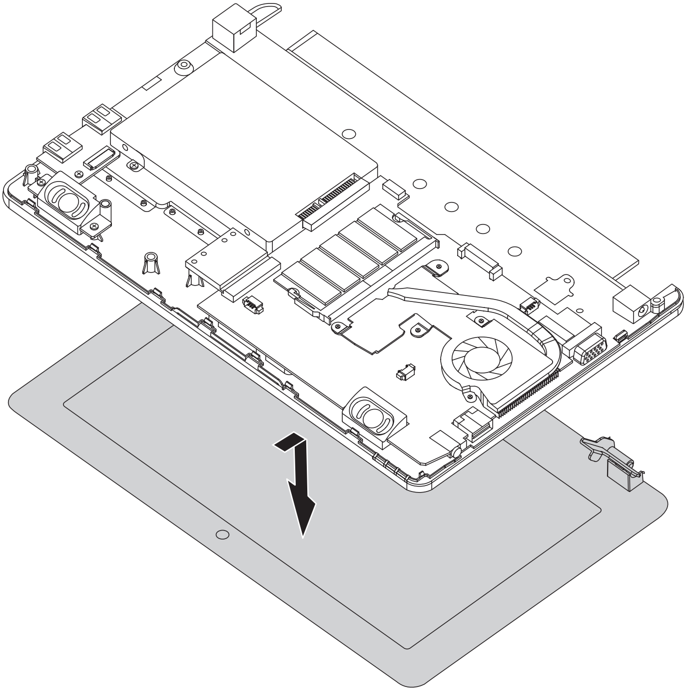
- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34

Figure 20: Procedure to remove the LCD unit



Step	Screws (quantity)	Color	Torque
1	M2.0 × 5.0 mm, flat round-head, nylon-coated (4)	Black	1.85 kgfcm

Figure 21: Procedure to remove the LCD unit (continued)



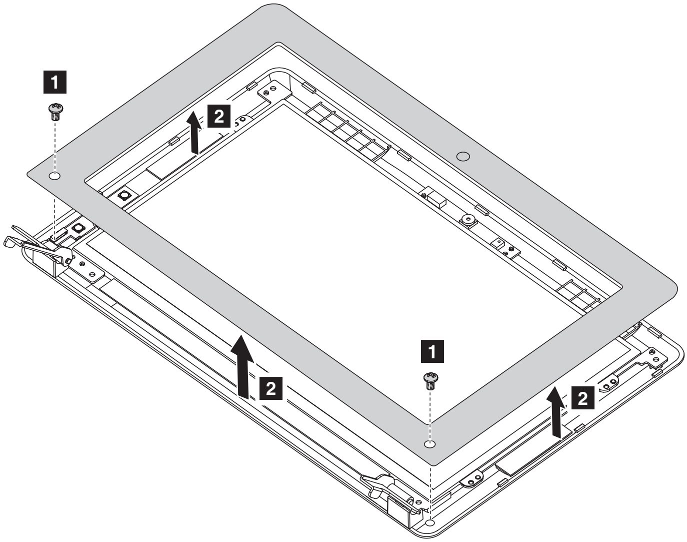
Remove the six back screws **1**. Detach the three connectors in the direction shown by arrow **2**. Remove the LCD unit.

When installing: Make sure that all connectors are attached firmly.

LCD front bezel

For access, remove these FRUs in order:
- "Battery pack" on page 31
- "Keyboard" on page 32
- "Base cover" on page 34
- "LCD unit" on page 51

Figure 22: Removal steps of LCD front bezel



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (2)	Black	1.35 kgfcm

Remove the two screws 1.

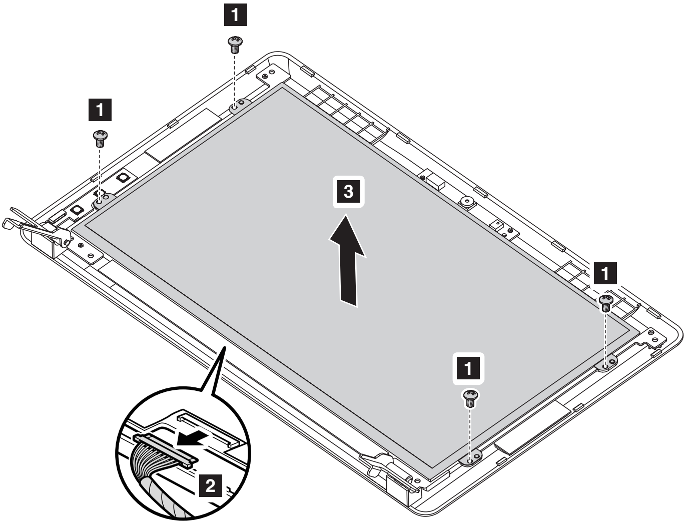
Remove the LCD front bezel in the direction shown by arrows 2.

LCD panel

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “LCD unit” on page 51
- “LCD front bezel” on page 53

Figure 23: Removal steps of LCD panel



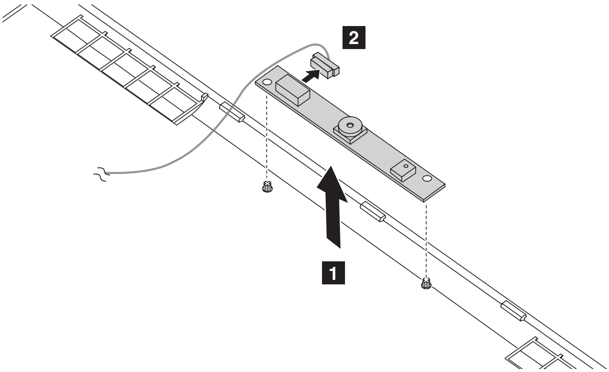
Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (4)	Black	1.35 kgfcm

Remove the four screws 1. Detach the connector under the LCD panel 2, and then remove the LCD panel in the direction shown by arrow 3.

Integrated camera

For access, remove these FRUs in order:
- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “LCD unit” on page 51
- “LCD front bezel” on page 53
- “LCD panel” on page 54

Figure 24: Removal steps of integrated camera



The integrated camera is attached to the top center of the LCD cover. Lift the integrated camera in the direction shown by arrow **1**. Detach the connector in the direction shown by arrow **2**.

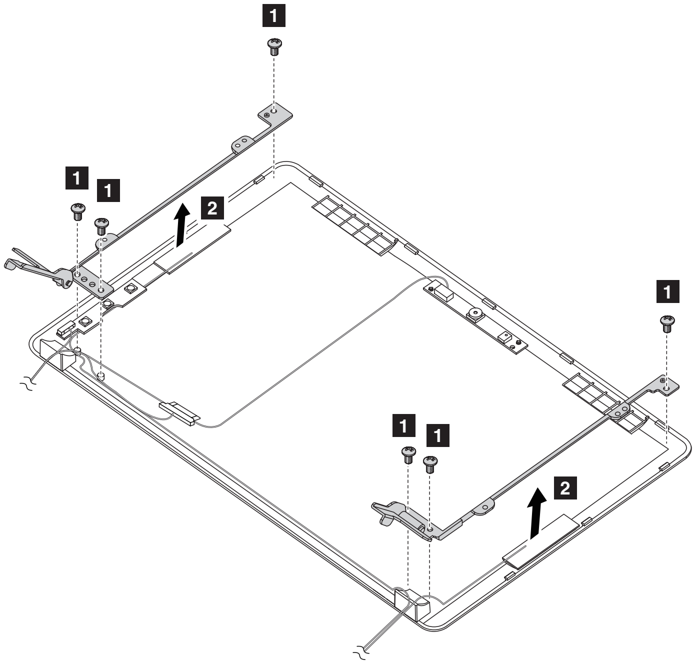
When installing: Attach the integrated camera to the top center of the LCD cover and ajust the its placement to make sure the connector is attached firmly.

Hinges

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “LCD unit” on page 51
- “LCD front bezel” on page 53
- “LCD panel” on page 54

Figure 25: Removal steps of hinges



Step	Screw (quantity)	Color	Torque
1	M2.0 × 3.0 mm, flat round-head, nylon-coated (6)	Black	1.35 kgfcm

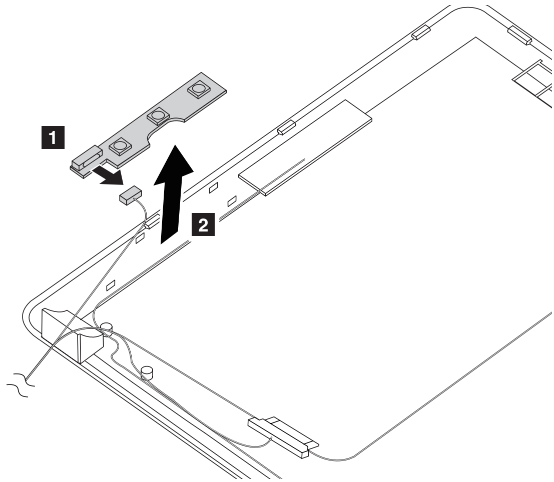
Remove the six screws 1, Lift and remove the hinges in the direction shown by arrows 2.

Power button board

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “LCD unit” on page 51
- “LCD front bezel” on page 53
- “LCD panel” on page 54
- “Hinges” on page 56

Figure 26: Removal steps of power button board



The power button board is attached to the left side of the LCD cover.
Detach the connector in the direction shown by arrow **1**. Remove the power button board in the direction shown by arrow **2**.

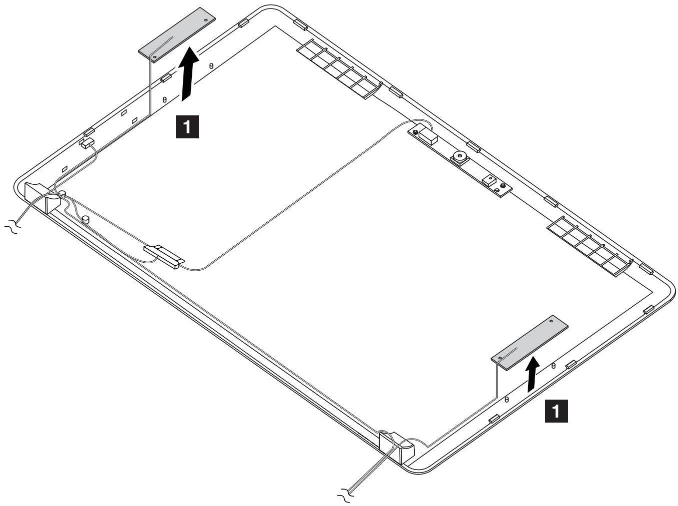
When installing: Attach the power button board to the left side of the LCD cover and adjust its placement to make sure it is attached firmly.

Antenna kit

For access, remove these FRUs in order:

- “Battery pack” on page 31
- “Keyboard” on page 32
- “Base cover” on page 34
- “LCD unit” on page 51
- “LCD front bezel” on page 53
- “LCD panel” on page 54
- “Hinges” on page 56
- “Power button board” on page 57

Figure 27: Removal steps of antenna kit

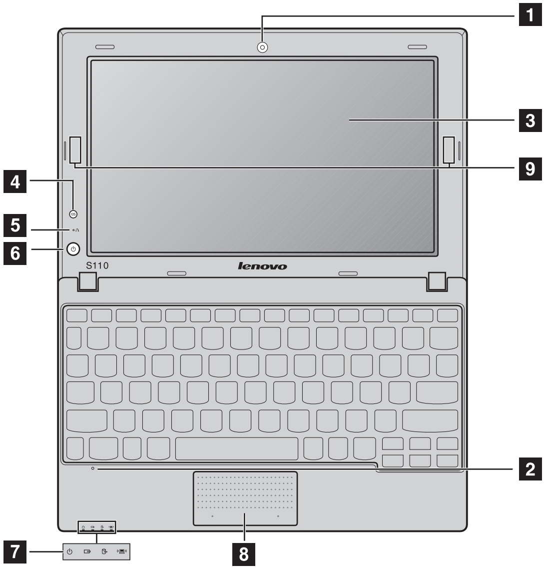


The antenna modules are attached to the left and right sides of the LCD cover. Remove the antenna modules in the direction shown by arrows 1.

When installing: Stick the antenna modules to the sides of the LCD cover and adjust their placement to make sure they are attached firmly.

Locations

Top view



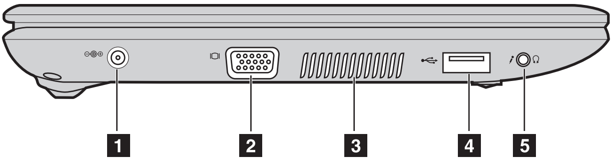
Attention:

- Do NOT open the display panel beyond 130 degrees. When closing the display panel, be careful NOT to leave pens or any other objects in between the display panel and the keyboard. Otherwise, the display panel may be damaged.

1	Integrated camera	Use the camera for video communication.
2	Built-in microphone	The built-in microphone (with noise reduction) can be used for video conferencing, voice narration, or simple audio recordings.
3	Computer display	The computer display with LED backlight provides brilliant visual output.
4	QS (Quick Start) button	When the computer is powered off, press this button to start Lenovo Quick Start.
5	OneKey Rescue system button	When the computer is powered off, press this button to start Lenovo OneKey Rescue system.

6	Power button	Press this button to turn on the computer.
7	System status indicators	-
8	Touchpad	The touchpad functions as a conventional mouse.
9	Wireless module antennas	The built-in antennas ensure optimal reception of wireless radio.

Left-side view

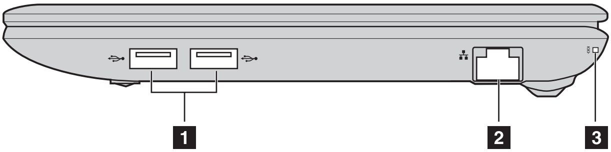


1	AC power adapter jack	Connect the AC adapter here.
2	VGA port	Connects to external display devices.
3	Fan louvers	Dissipate internal heat.
4	USB port	Connects to USB devices.
5	Combo audio jack	Connects to headsets or headphones.

Attention:

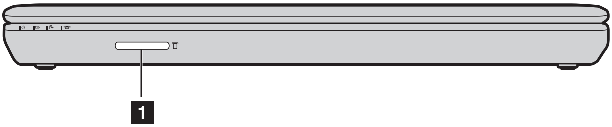
- Listening to music at high volume over extended periods of time may damage your hearing.

Right-side view



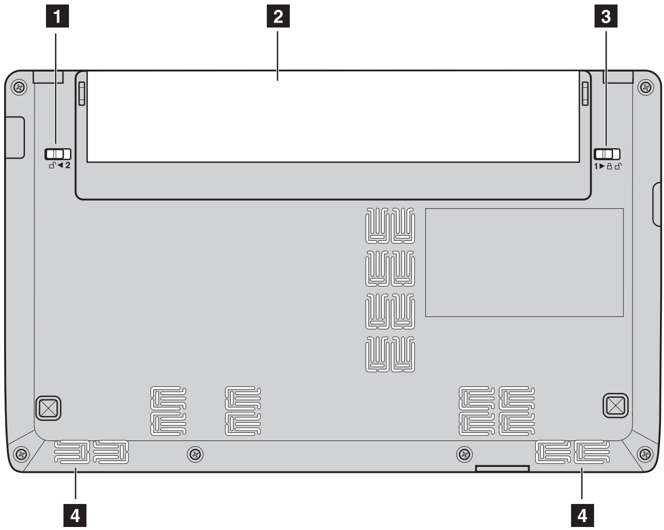
1	USB port	Connects to USB devices.
2	RJ-45 port	This port connects the computer to an Ethernet network.
3	Lanyard hole	Used for attaching a lanyard (not supplied).

Front view



1	Memory card slot	Insert memory cards (not supplied) here.

Bottom view



1	Battery latch - manual	The manual battery latch is used to keep the battery pack secured in place.
2	Battery pack	-
3	Battery latch - spring loaded	The spring-loaded battery latch keeps the battery pack secured in place.
4	Speakers	The stereo speakers provide rich and powerful sound.

Parts list

This section presents the following service parts:

Note:

- Each FRU is available for all types or models, unless specific types or models are specified.

Overall

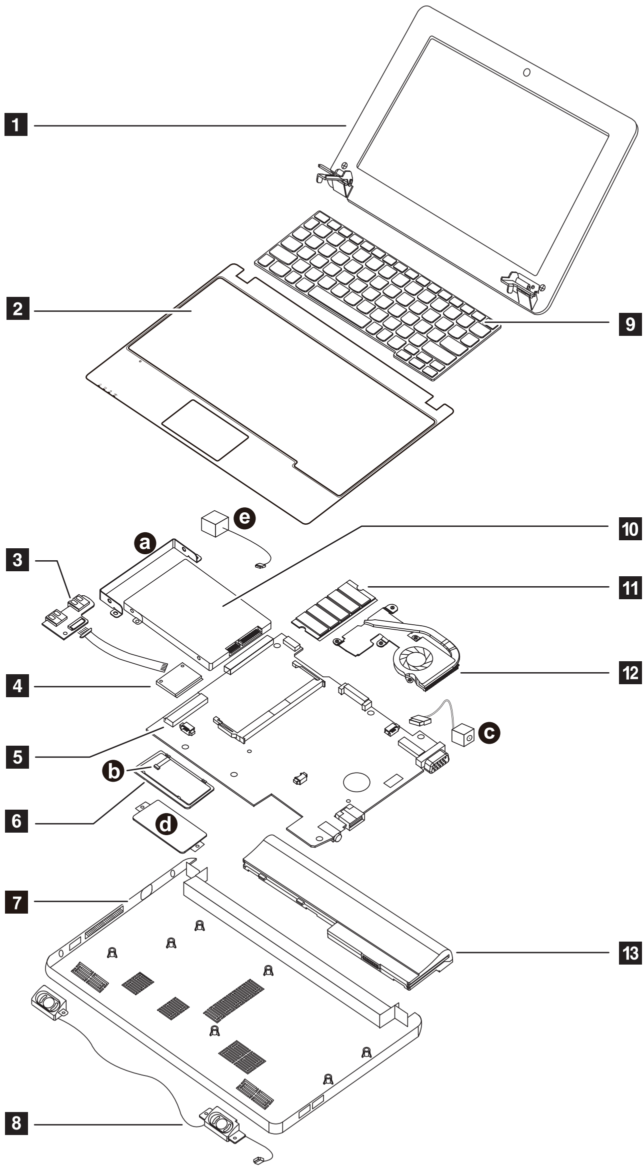


Table 4.Parts list—Overall

No.	FRU	FRU No. or Lenovo P/N
a-e	See “Miscellaneous parts” on page 77	
1	LCD unit (see “LCD FRUs” on page 68)	
2	S100 UPPER CASE BLACK	31050149
2	S100 UPPER CASE RED	31050636
2	S100 UPPER CASE BLUE	31050635
2	S100 UPPER CASE WHITE	31050777
3	S110 USB BOARD	90200145
4	Wlan, 802.11b/g/n, Wistron, DHXA-95(AR9285)	NA
4	Wlan, 802.11b/g/n, Bitland, BM8A36(RTL8188)	NA
4	Wlan, 802.11b/g/n, Castlenet, RTL8188CE(RTL8188)	NA
4	Wlan, Wimax, Intel 6250NX MOW M PCIE NB HMC	20002321
4	Wlan, Wimax, Intel 6150NX MOW M PCIE NB HMC	20002484
4	Wlan, Wimax, Intel 6150GX MOW M PCIE NB HMC	20002529
4	S100 PCIE-HALF WIFI DHXA-95(AR9285)	20002577
4	S100 PCIE-HALF WIFI BM8A36(RTL8188)	20002578
4	S100 PCIE-HALF WIFI RTL8188CE(RTL8188)	20002579
5	S110 MB N2600 W/WIFI/COMBO WO/USB3.0	90000030
5	S110 MB N2600 W/WIFI/COMBO/USB3.0	90000029
5	S110 MB N2800 W/WIFI/COMBO WO/USB3.0	90000033
6	S100 TP MODULE BLACK	31050148
6	S100 TP MODULE RED	31050750
6	S100 TP MODULE BLUE	31050749
6	S100 TP MODULE WHITE	31050776
7	S100 LOWER CASE BLACK	31050147

Table 4.Parts list—Overall (Continued)

No.	FRU	FRU No. or Lenovo P/N
8	S100 SPEAKER L+R	31050136
9	Keyboard (see “Keyboard” on page 70)	
10	SATA Hard disk drive assembly, WD WD2500BPVT 5400RPM 250G	16200021
10	SATA Hard disk drive assembly, HGST HTS543225A7A384 5400RPM7MM 250G	16005023
10	SATA Hard disk drive assembly, Seagate ST250LT003 5400RPM 7MM 250G	16005210
10	SATA Hard disk drive assembly, Toshiba MK2565GSX 5400RPM 250G	16004641
10	SATA Hard disk drive assembly, HGST HTS545025A7E380 5400PRM7mm 250G HDD	16200069
10	SATA Hard disk drive assembly, WD WD3200BPVT 5400RPM320G	16200022
10	SATA Hard disk drive assembly, HGST HTS543232A7A384 5400RPM7MM 320G	16005024
10	SATA Hard disk drive assembly, Seagate ST320LT020 5400RPM 7MM 320G	16005211
10	SATA Hard disk drive assembly, Toshiba MK3265GSX 5400RPM 320G	16004642
10	SATA Hard disk drive assembly, HGST HTS545032A7E380 5400PRM7mm 320G	16200068
10	SATA Hard disk drive assembly, WD WD5000BPVT-24HXZ 5400RPM 500G	16004846
10	SATA Hard disk drive assembly, Seagate ST9500325AS 500G 9NB	16004189
10	SATA Hard disk drive assembly, HT HTS547550A9E384 5400RPM 500G HDD	16200006
10	SATA Hard disk drive assembly, Toshiba MK5065GSX 5400RPM 500G	16004643
10	SATA Hard disk drive assembly, HGST HTS545050A7E380 5400PRM7mm 500G HDD	16200067

Table 4.Parts list—Overall (Continued)

No.	FRU	FRU No. or Lenovo P/N
11	DDRIII 1333 1GB, MT8JTF12864HZ-1G4G1(V68A/ 1Gb/50nm)	11200398
11	DDRIII 1333 1GB, M471B2873GB0-CH9(Rev G/1Gb/ 35nm)	11013084
11	DDRIII 1333 2GB, M471B5773DH0-CH9 (Rev D /2Gb/ 35nm)	11012808
11	DDRIII 1333 2GB, HMT325S6CFR8C-H9 N0(Gemma/ 2Gb/38nm)	11200226
11	DDRIII 1333 2GB, RMT3010EC58E8F-1333(C/2Gb/ 40nm)	11200060
11	DDRIII 1333 2GB, SP321NH08HAF(C/2Gb/45nm)	11200058
11	DDRIII 1333 2GB, MT8KTF25664HZ-1G4M1(V79D/ 2Gb/42nm)	11200228
11	DDRIII 1333 2GB, NT2GC64B88G0NS-CG (G/2Gb/ 42nm)	11200230
12	S110 Thermal Module W/Fan for6000RPM	90200125
13	Battery, 3 cell 2200 Ah, Celxpert (black), 2.2Ah,11.1V	121001129
13	Battery, 3 cell 2200 Ah, Simplo (black), 2.2Ah,11.1V	121001125
13	Battery, 6Cell 4400 Ah, Celxpert (black), 4.4Ah, 11.1V	121001127
13	Battery, 6Cell 4400 Ah, Simplo (black), 4.4Ah, 11.1V	121001123

LCD FRUs

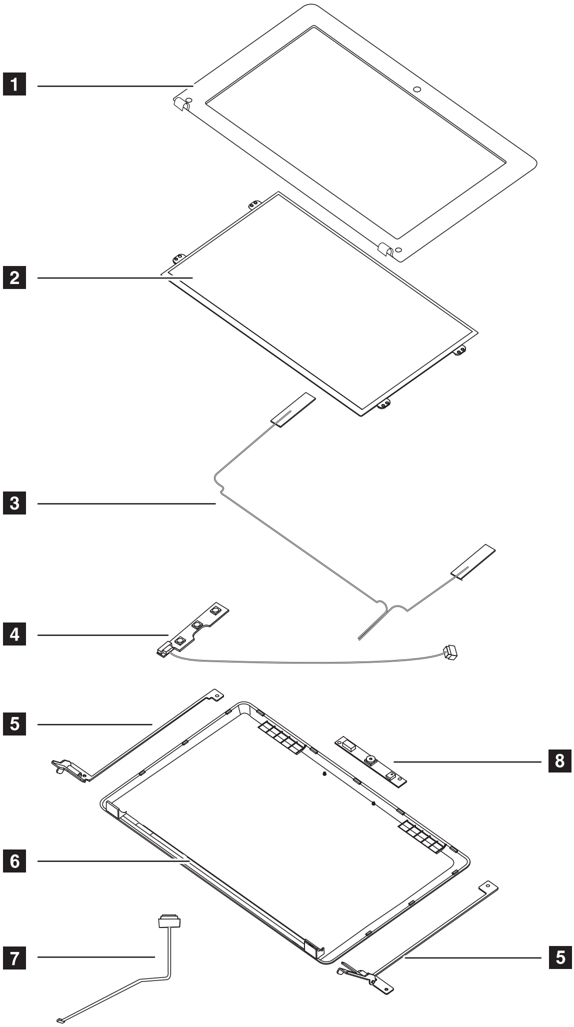


Table 5.Parts list—LCD FRUs

No.	FRU	FRU No. or Lenovo P/N
1	S110 LCD BEZEL W/carema hole black	90200126
1	S110 LCD BEZEL W/carema hole blue	90200127
1	S110 LCD BEZEL W/carema hole red	90200128
1	S110 LCD BEZEL W/carema hole white	90200129
2	Panel, 10.1" Flat type 1024x600, CMI N101LGE-L41 SD G F LED1	18200140
2	Panel, 10.1" Flat type 1024x600, AUO B101AW06 V1 HW0A SD G F LED1	18200139
2	Panel, 10.1" Flat type 1024x600, SEC LTN101NT08 XXXX	TBD
2	S100 CMI N101LGE-L41 WSVGA F NB LCD	18004990
2	S100 AUO B101AW06 V1 WSVGA F NB LCD	18004991
2	S100 Bitland BT101TN01 V3 WSVGA F NB LCD	18005235
3	S110 ANNTAN LEFT WHITE FOR WIFI+WIMAX	90200122
4	S100 POWER BOWER	11013589
5	S100 LCD BRACKET W/HINGE R	31050140
5	S100 LCD BRACKET W/HINGE L	31050137
6	S100 LCD COVER BLACK	31050145
6	S100 LCD COVER RED	31050632
6	S100 LCD COVER BLUE	31050631
6	S100 LCD COVER WHITE	31050774
6	S100 LCD COVER Flower	31051353
7	S100 LVDS CABLE	31050131
8	S110 Camera Board 0.3M USB2.0	90200120
8	S100 CAMERA 2.0M 1203-00038/4/6	31050124

Keyboard

Table 6.Parts list—Keyboard

Language			P/N
Black	Chicony	Japanese	25010969
		English	25010968
		UK English	25010967
		International English	25010966
		Swiss	25010975
		Slovenian	25010974
		Icelandic	25010972
		Belgian	25010971
		Four Nordic countries	25010970
		Hungarian	25010996
		Hebrew	25010995
		Greek	25010994
		Dutch	25010993
		Brazilian	25010991
		Arabic	25010990
		German	25010989
		French	25010988
		Russian	25010987
		Traditional Chinese	25010986
		Korean	25010985
		French&English	25010984
		Latin	25010983
		Portuguese	25010982
		Thai	25010981

Table 6.Parts list—Keyboard (Continued)

Language			P/N
Black (Continued)	Chicony (Continued)	Turkish	25010980
		Spanish	25010979
		Italian	25010978
		Bulgarian	25010977
		Czechoslovakia	25011165
		Indian	25200336
	Sunrex	English	25201418
		UK English	25201419
		Italian	25201420
		Spanish	25201421
		Turkish	25201422
		Thai	25201423
		Portuguese	25201424
		Latin	25201425
		French&English	25201426
		Korean	25201427
		Traditional Chinese	25201428
		Russian	25201429
		French	25201430
		German	25201431
		Arabic	25201432
		Brazilian	25201433
		Dutch	25201435
		Greek	25201436
		Hebrew	25201437
		Hugarian	25201438

Table 6.Parts list—Keyboard (Continued)

Language			P/N
Black (Continued)	Sunrex (Continued)	Four Nordic countries	25201439
		Belgian	25201440
		Icelandic	25201441
		Slovenian	25201442
		Swiss	25201443
		International English	25201444
		Bulgarian	25201445
		Czechoslovakia	25201446
		Indian	25201447
	APLS	International English	25010937
		Swiss	25010936
		Slovenian	25010935
		Icelandic	25010933
		Belgian	25010932
		Four Nordic countries	25010931
		Hungarian	25010930
		Hebrew	25010929
		Greek	25010928
		Dutch	25010927
		Brazilian	25010925
		Arabic	25010924
		German	25010923
		French	25010922
		Russian	25010921
		French&English	25010918
		Traditional Chinese	25010920

Table 6.Parts list—Keyboard (Continued)

Language			**P/N**
Black (Continued)	APLS (Continued)	Korean	25010919
		Latin	25010917
		Portuguese	25010916
		Thai	25010915
		Turkish	25010914
		Spanish	25010913
		Italian	25010912
		UK English	25010938
		English	25010939
		Japanese	25010940
		Bulgarian	25010911
		Czechoslovakia	25011170
White	Chicony	Japanese	25009921
		International English	25010010
		Swiss	25010011
		Slovenian	25010012
		Icelandic	25010014
		Belgian	25010015
		Four Nordic countries	25010016
		Hungarian	25010017
		Greek	25010019
		Dutch	25010020
		Brazilian	25010022
		Arabic	25010023
		German	25010024
		French	25010025

Table 6.Parts list—Keyboard (Continued)

Language			**P/N**
White (Continued)	Chicony (Continued)	Russian	25010026
		Traditional Chinese	25010027
		Korean	25010028
		French&English	25010029
		Latin	25010030
		Portuguese	25010031
		Thai	25010032
		Turkish	25010033
		Spanish	25010034
		Italian	25010035
		UK English	25009926
		English	25009924
		Bulgarian	25010290
		Czechoslovakia	25011163
		Hebrew	25010018
		Indian	25201627
	Sunrex	English	25201448
		UK English	25201449
		Italian	25201450
		Spanish	25201451
		Turkish	25201452
		Thai	25201453
		Portuguese	25201454
		Latin	25201455
		French&English	25201456
		Korean	25201457

Table 6.Parts list—Keyboard (Continued)

Language			P/N
White (Continued)	Sunrex (Continued)	Traditional Chinese	25201458
		Russian	25201459
		French	25201460
		German	25201461
		Arabic	25201462
		Brazilian	25201463
		Dutch	25201465
		Greek	25201466
		Hebrew	25201467
		Hugarian	25201468
		Four Nordic countries	25201469
		Belgian	25201470
		Icelandic	25201471
		Slovenian	25201472
		Swiss	25201473
		International English	25201474
		Bulgarian	25201475
		Czechoslovakia	25201476
		Indian	25201477
	APLS	Czechoslovakia	25011168
		Bulgarian	25010292
		International English	25009899
		Swiss	25009900
		Slovenian	25009901
		Icelandic	25009903
		Belgian	25009904

Table 6.Parts list—Keyboard (Continued)

Language			**P/N**
White (Continued)	APLS (Continued)	Four Nordic countries	25009905
		Hungarian	25009906
		Hebrew	25009907
		Greek	25009908
		Dutch	25009909
		Japanese	25009920
		Brazilian	25009912
		Arabic	25009913
		German	25009914
		French	25009915
		Russian	25009916
		Traditional Chinese	25009917
		Korean	25009918
		French&English	25010066
		Latin	25010067
		Portuguese	25010068
		Thai	25010069
		Turkish	25010070
		Spanish	25010071
		Italian	25010072
		UK English	25009925
		English	25009923

Miscellaneous parts

Table 7.Parts list—Miscellaneous parts

FRU	FRU No. or Lenovo P/N
(a) S100 HDD BRACKET	31050142
(b) S100 TP CABLE	31050127
(c) S100 DC-IN CABLE	31050151
(d) S100 TP BRACKET	31050144
(e) S100 RJ45 CONNECTER W/CABLE	31050180

AC adapters

Table 8.Parts list—AC adapters

FRU	FRU No. or Lenovo P/N
AC Adaptor, 30 W 20V,1.5A, Delta ADP-30SH BA 20V1.5A	36001806
AC Adaptor, 30 W 20V,1.5A, Litons PA-1300-12LC black	36001809
AC Adaptor, 30 W 20V,1.5A, Chicony CPA09-A030 20V1.5A	36001804

Power cords

Table 9.Parts list—3-pin power cords

Region (3 Pin)	P/N
CCC • SSD YD-118-1+IEC53RVV+SSD-3-2B-1 1m	145000602
CCC • LINETEK PC323+RVV300/300+LS15 1m	145000600
Argentina • LINETEK LS15+H03VV-F+LP39 1m	145000599
Danmark • LINETEK LS15+H03VV-F+LP-38 1m	145000598
Switzerland • LINETEK LS15+H03VV-F+LP-37 1m	145000597
Brazil • LINETEK LS15 H03VV-F LP26A 1m	145000596
Israel • LINETEK LS15+H03VV-F+LP-41 1m	145000595
UL • LINETEK LP-30B + SPT-2 + LS15 1m	145000594
UK • LINETEK LP-61L+ H03VV-F+ LS15 1m	145000593
Indian • LINETEK PE-361+ H05VV-F+ LS15 1m	145000592
Italy • LINETEK LS15+H03VV-F+PE-336 1m	145000591

Table 9.Parts list—3-pin power cords (Continued)

Region (3 Pin)	P/N
Korea • LINETEK LS15+H05VV-F+LP-E04A 1m	145000590
Australia • LINETEK LS15+H03VV-F+LP-23A 1m	145000589
Taiwan • LINETEK LS15+VCTF+LP-53 1m	145000588
Japan • LINETEK LS15+VCTF+LP-54 1m	145000587
Africa • LINETEK LS15+H03VV-F+PE-364 1m	145000586
CE • LINETEK LP-34+H03VV-F + LS15 1m	145000585
CCC • Longwell LSG-31+RVV300/300+LS-18 1m	145000568
Argentina • Longwell LP-24+H03VV-F+LS-18 1m	145000567
Danmark • Longwell LP-40+H03VV-F+LS-18 1m	145000566
Switzerland • Longwell LP-37+H03VV-F+LS-18 1m	145000565
Brazil • Longwell LP-46+H03VV-F+LS-18 1m	145000564
Israel • Longwell LP-41+H03VV-F+LS-18 1m	145000563
UL • Longwell LP-30B+SPT-2 18AWG+LS-18 1m	145000562
UK • Longwell LP-61L+H03VV-F+LS-18 1m	145000561
Indian • Longwell LP-67+BIS+LS-18 1m	145000560
Italy • Longwell LP-22+H03VV-F+LS-18 1m	145000559
Korea • Longwell LP-486+KTLH03VV-F+LS-5 1m	145000558

Table 9.Parts list—3-pin power cords (Continued)

Region (3 Pin)	P/N
Australia • Longwell LP-23A+LFC-3R+LS-18 1m	145000557
Taiwan • Longwell LP-71+VCTF+LS-33 1m	145000556
Japan • Longwell LP-54+VCTF+LS-18 1m	145000555
Africa • Longwell LP-39+H03VV-F+LS-18 1m	145000554
CE • Longwell LP-34A+H03VV-F+LS-18 1m	145000553
• VOLEX GB10S3+RVV 300/500+VAC5S 1m	145000538
• VOLEX US15S3+SPT-2+VAC5S 1m	145000537
• VOLEX MP5004+H03VV-F+VAC5S 1m	145000605
• VOLEX IA6A3+IS694+VAC5S 1m	145000536
• VOLEX MP232+H03VV-F+VAC5S 1m	145000524
• VOLEX IT10S3+HO3VV-F+VAC5S 1m	145000535
• VOLEX MP233D+H03VV-F+VAC5S 1m	145000534
• VOLEX M2511+KETI IEC+VAC5S 1m	145000533
• VOLEX AU10S3+H03VV-F+VAC5S 1m	145000532
• VOLEX TW15CS3+VCTF+VAC5S 1m	145000531
• VOLEX VAC5S+VCTF+M755 1m	145000530
• VOLEX VA2073+H03VV-F+VAC5S 1m	145000528
• VOLEX CH10S3+H03VV-F+VAC5S 1m	145000527
• VOLEX SI16S3+H03VV-F+VAC5S 1m	145000526
• VOLEX M2511+HO3VV-F+VAC5S 1m	145000525
• VOLEX SA16A+HO3VV-F+VAC5S 1m	145000529

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